



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

Topic #3: Survival – Structural Size-Up and Situational Awareness

- a. Keep apprised of different types of building materials and construction used in your community.
- b. Develop a comprehensive size-up checklist.
- c. Always complete a 360 walk of the structure to collect valuable, operational decision-making information.
- d. Learn the practice of reading smoke.
- e. Be familiar with the accepted rules of engagement.
- f. Learn your accountability system and use it.
- g. Master your tools and equipment.
- h. Remain clam and concentrate.

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Report Number: 05-621

Report Date: 11/21/2005 0006

Demographics

Department type: Paid Municipal

Job or rank: Assistant Chief

Department shift: 24 hours on - 48 hours off

Age: 34 - 42

Years of fire service experience: 17 - 20

Region: FEMA Region V

Service Area: Suburban

Event Information

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

Event date and time: 04/13/2005 0054

Hours into the shift: 17 - 20

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Uncertain

What were the contributing factors?

- Other
- Decision Making
- Situational Awareness

What do you believe is the loss potential?

- Life threatening injury

Event Description

At 0054 hours the (department name deleted) FD responded with a full assignment for a confirmed working house fire. On my arrival, I found a one-story, single family dwelling with moderate smoke showing. Two occupants were on the front porch, in need of medical attention. One occupant stated it was a basement fire. E-(X, unit number deleted) was assigned fire attack. L-(unit number deleted) was assigned primary search. E-(XX, unit number deleted) was directed to establish a water supply and advance a back up line. E-(XXX, unit number deleted) was assigned as the RIT. (Department name deleted) R-(unit number deleted) was directed to care for the two occupants on the front porch.

E-(X) stretched a 1 3/4" line through the front door, looking for the basement stairs. L-(unit number deleted) entered through the same door and began a primary search. I completed a 360 degree survey, and confirmed there was fire in the basement. Upon returning to the front of the building, conditions were getting worse. The fire building was approximately 50 years old, and neither balloon frame nor lightweight truss construction. I remember thinking several times that "we have time to operate in this structure". E-(X) called to say they were unable to find the basement stairs, and requested that a line operate on the

basement fire through the outside basement windows. I directed E-(XX) to perform this task. E-(XX)'s line had little if any effect on the fire. A short time later, E-(X) called and requested an immediate backup line inside the building. I directed E-(XX) to take their line inside the building and back up E-(X). I also directed E-(XXX), as the RIT team, to pull a 2 1/2" line and operate it through the basement window on the visible fire. The 2 1/2" line had little if any effect on the basement fire. This information was communicated to the inside crews. I then walked around to the back of the house for a second time. I noticed visible fire at a 1st floor window on the "C" side of the building, as well as fire venting through the roof. Seeing this, I ordered an evacuation of the building. This was done via radio, and I ordered the pump operators on the scene to sound their air horns in accordance with our SOG's. This was approximately 10-12 minutes into the interior attack.

All crews evacuated the building, and a PAR was completed. An exterior attack was initiated. This 25' x 50' ranch dwelling required two 2 1/2" lines and two 1 3/4" lines to extinguish. In talking to the interior crews, the "close call" was revealed. E-(XX)'s crew reported exiting the front door ("A" side) on "carpet", meaning the supporting floor was gone. L-(unit number deleted)'s crew reported finding a 4' hole burned through the floor on the "C" side. E-(X)'s crew reported not hearing the evacuation order via radio because of the sound of the fire and their operating hoseline, but did hear the apparatus air horns.

Fire investigation revealed that the fire had free burned for 45-60 minutes AFTER being discovered by the homeowner's live in caregiver. The caregiver spent 15-20 minutes searching for the origin of the smoke he detected and trying to fight the fire. The fire was caused by furnace malfunction. The caregiver then spent 15-20 minutes evacuating the bedridden homeowner and removing his personal possessions from the building. Once out of the building, the caregiver went from neighboring house to house trying to get someone to call the fire department. Due to a language barrier, the neighbors thought the caregiver was a vagrant or someone trying to break in. Police investigating the disturbance discovered the fire.

The fire investigation also revealed the presence of a combustible void space that started in the basement and went all the way to the underside of the roof. This void space served no discernible purpose, but allowed the fire to vent through the roof. Fire spread through the ductwork laterally extended the fire throughout the first floor.

Lessons Learned

My previous experience base led me to believe that, with occupants having been in the house at the time of the fire, that the fire department would have been notified within 5-10 minutes of discovery of the fire. My experience with this type of structure, and my "internal clock", led me to believe that we had time to successfully wage an interior attack at this fire.

The primary lesson learned was to never assume anything about the fire's time of origin or likely methods of travel throughout the structure. Good training had the interior crews constantly assessing the conditions around them, as well as sounding the floor constantly.

In addition, the importance of not relying on radios to communicate an evacuation order was driven home. Our SOG for sounding air horns to signal an evacuation dated back to when not all members were radio equipped. As a staff, we had considered removing that provision for being "out-dated". This fire re-affirmed the need for signaling evacuation orders in more than one way.

Report Number: 05-656
Report Date: 12/10/2005 1505

Demographics

Department type: Combination, Mostly volunteer
Job or rank: Fire Fighter
Department shift: 24 hours on - 48 hours off
Age: 25 - 33
Years of fire service experience: 7 - 10
Region: FEMA Region IV
Service Area: Rural

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 10/24/2005 0815
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? Yes
What were the contributing factors?

- Decision Making
- Training Issue
- Individual Action

What do you believe is the loss potential?

- Life threatening injury
- Minor injury
- Lost time injury

Event Description

A structure fire occurred during the final hours of Hurricane Wilma. It began as a car on fire beneath the structure. It extended through the wall to the roof of the structure. The building was a pre-fab, balloon construction, truss roof. The (deleted) IC directed a firefighter to check the roof for ventilation. The firefighter climbed the ladder, and without accessing the roof, reported the roof had self ventilated. The IC direction was to "go ahead and cut a hole anyway" There was a fire crew inside the structure as well and was not advised of the fire through the roof. Interviews with the interior crew determined at that time they were still not aware the fire was in the walls or the roof. They were searching for extension with a TIC.

The vent team admitted not knowing any better and prepared to ventilate. When his partner was bringing the roof ladder up to set, he took three steps onto the roof and fell through to his chest. If this was any other firefighter it is generally accepted that they would not have been able to self rescue, but this firefighter is

exceptionally fit and pulled himself out. He later attributed this to adrenaline and the fact that the fire was burning directly beneath him. He came down and reported to the IC who is not a Firefighter I, II, or trained officer but holds a (deleted) Chief title. The Chief, aware of the situation, did not immediately order the evacuation of the building regardless of suggestions by another firefighter on scene. The structural stability had already been proven as dangerous. The firefighters had to take it upon themselves to pull the evacuation order, air horn blast. This IC has not been investigated or suspended pending investigation regardless of all efforts of members.

Lessons Learned

Severe lack of training was exhibited by the IC and the firefighter on the roof.
Certification should be required for the position you occupy.
Full investigation should have been initiated immediately.
Unsafe orders can be refused.

Report Number: 07-1180

Report Date: 12/28/2007 0842

Demographics

Department type: Paid Municipal

Job or rank: Battalion Chief / District Chief

Department shift: Other: 24 hour, 4 in 12 days

Age: 43 - 51

Years of fire service experience: 27 - 30

Region: FEMA Region IV

Service Area: Urban

Event Information

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

Event date and time: 12/18/2007 0740

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

Do you think this will happen again?

What were the contributing factors?

- Individual Action
- Decision Making
- Situational Awareness
- Command
- Teamwork

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description

This morning at 0740 hours [identifying information deleted] a full box alarm was already enroute when the box was upgraded to a working fire. Engine [A] arrived at 0747 and reported a working fire in a two level single family dwelling with heavy fire involvement in the garage and bonus room area above. Two attack lines were advanced from the unburned portion of the house, one upstairs and downstairs. Primary searches were initiated and all companies were committed when Battalion [A] arrived at 0749. After a briefing from Command, Battalion [A] assumed command at 0752. At 0753 Command observed the fire conditions in the garage and bonus room area knocked down. However, heavy smoke was still visible from the main house attic area.

At 0754 Command observed conditions of the building and fire that just did not look right. Command ordered an evacuation of the structure. It was only a few

seconds after Alarm transmitted the evacuation tone that the whole garage area bonus room with its roof, collapsed in a lean-to collapse to the garage floor. Crews from Engine [A] were conducting a primary on the second floor in the bonus room at the time of the collapse. All three firefighters self rescued by climbing back up to the second floor to the bonus room door. Engine [B] FF's, Captain [Eng-B], FF [Eng-B-1] and FF [Eng-B-2] were extinguishing fire in the garage area. They were in the process of extinguishing fire in the garage and had made their way closer to the kitchen door when the collapse occurred. Captain [Eng-B] and FF [Eng-B-1] were able to exit the garage into the kitchen. FF [Eng-B-2] was trapped under part the of lean-to second floor collapse near the kitchen door. Had Engine [B]'s crew been further into the garage, the outcome of this incident would have been very tragic. All firefighters involved stated that there were no warning sounds, or other indications from the inside that a collapse was imminent.

Command immediately transmitted a 2nd Alarm and reported firefighters trapped. In the initial moment after the collapse, it was not clear who, or how many firefighters were missing. All hands went to work. The fire in the garage now had intensified as the result of the collapse. Exterior attack lines were used for a brief period to knock down the fire in the garage. At 0756 Command received a report that crews had contact with FF [Eng-B-2] and he was alert. A quick PAR was conducted and it confirmed that FF [Eng-B-2] was the only member missing. Engine [C] (0756) and Rescue [A] (0758) arrived on scene and began assisting companies on scene. Positive pressure ventilation was set up to keep the area in which FF [Eng-B-2] was trapped clear of as much smoke as possible.

At 0801 FF [Eng-B-2] was removed from the structure and transported to the hospital along with FF [Eng-B-1]. FF [Eng-B-2] sustained a small second degree burn to this buttocks and FF [Eng-B-1] was evaluated for a leg injury. Both firefighters were treated and released.

The fire is under investigation. As of this evening (1730) a cause could not be determined. However, we have no indications at this time that the fire was anything but accidental. Damage is estimated at \$ 100,000. The occupants had left for work and school earlier that morning. They were renting the home and fortunately had just secured renters insurance. Their dog was rescued before our arrival by neighbors. They were also being assisted by the Red Cross. The Red Cross and {a national} restaurant provided our firefighters with lunch at stations [D] and [B].

Only two companies from the 2nd Alarm were used. The balance of the 2nd alarm was released at 0819. Crews remained on scene throughout the morning assisting the family and the Arson Task Force team.

There are many thanks, and lots of praise to go around, too many to mention here. A follow up report will follow. A critique is planned for Sunday December 23 at 1000 at Station [C].

[Print contained in squared brackets denotes editing by the reviewer.]

Lessons Learned

As discussed at this mornings critique here is a list of recommendations and some lessoned learned and reinforced about our near miss firefighter trapped incident.

Recommendations

- Have all officers and firefighters review the accountability procedures and PAR tag responsibilities. This fire occurred during morning shift change. Several members from the A division boarded the rigs and rode to the incident. When the collapse occurred the on-line CAD accountability showed all A shift personnel on the rigs. It does not change until 0800 hours. Thankfully, the company officers involved were aware of who was on their trucks and alerted the IC to that fact. Several members self-dispatched to the scene. They did report to Command and none were engaged in active firefighting. Right now, the PAR tags are the only reliable system in place to determine accountability on scene. Their proper use and care can not be understated. Each firefighter must take responsibility to see that their PAR tag is either on or off the rig. There is not, and probably will never be a reliable electronic method short of scan enabled, skin imbedded ID chips that can take the place of a PAR tag. It is not the Engineer's job, or the Captains job to put their firefighter's PAR tags on the rig. It is the Captain's job to make sure the system is used as it was intended. The PAR tags on the rigs must be correct at 0735 hours as they are at 1530 hours, 1802 hours, or any other time 24/7, 365. A firefighter should treat their PAR tag like every other piece of PPE.
- All firefighters and officers should have three PAR tags. According the current G.O. on that subject ([policy number] states, "Each first line supervisor or company officer will insure that each member has three accountability tags (PAR Tags)". As it stands now, our firefighters are only issued two PAR tags. Our current culture is to keep one on the turnout coat and one for the board at the firefighter's home station. This is the tag that gets put on the rig. A recent check in Battalion [A] B showed two time out personnel on the rigs with no accompanying PAR tag. Interviews with the personnel involved in the incident revealed that PAR tags are not a personnel priority. Most of the firefighters told me "the driver puts the tags on the truck". I was also told that firefighters are improvising a PAR tag for members who fail to bring their PAR tags on times or work subs by using tape and a marker over someone else's PAR tag. We are good at improvising! All Battalion [A] B personnel now understand that no matter how many PAR tags they have, it is their responsibility to make sure their tags are on, or off, the rigs they are riding, 24/7, 365.
- All company officers should review the building construction features of lightweight wood truss construction. Never underestimate the weakness of

lightweight floor and roof trusses in a fire situation. This collapse occurred seven minutes after the first company arrived on scene. The outside bearing wall that supported one end of the second floor 22 ft long 2X4 web trusses were only sheeted on the outside. There was no drywall on the inside. Drywall on the inside of bearing wall in a garage is a luxury. The only walls in a garage that must be dry walled are the walls next to any heated area. Drywall on that outside wall may have provided additional protection for the columns (2X4's on 16' centers) from the fire that was burning in the garage. That wall failed fast. It brought with it the bonus room, its roof system, and all the room's heavy furniture. Bonus rooms seem to be a good place for hide-a-bed sofas.

- Always do a 360 walk around of a building on fire. Reinforce that a command officer's size up is not complete until this occurs. Size up has to go on continuously during all fire ground operations. My size up was not complete, that is one of the reasons for the evacuation order.
- Review the operation of assigned fire radios with all firefighters. Alarm sounded the evacuation tone over the operations channel. Very few if any firefighters or officers in the structure heard the tones before the collapse.
- Look into the possibility of using another tone for the standard evacuation tone. It was suggested at the critique that our CAD system has other distinct tones that can be used for evacuation orders. The current series of three short beeping tones are not enough or different enough to draw the appropriate attention.
- Include a firefighters "trapped" scenario in training for fire ground emergencies and Maydays. This will help everyone realize that cribbing and shoring are not just for USAR training. Cribbing is easy to build when you can see what you are doing. Building a lifting crib system in the dark is another challenge. Included in this training should be changing SCBA bottles in the dark and smoke as well as using the RIT pack under the same conditions.
- All of our in service training for firefighter down paid off. No one panicked. All the officers had a plan and used initiative to solve the problem at hand.
- Trust your gut feelings about the safety of a situation. If something does not seem right, always make decisions on the basis of "everyone goes home".
- Call for help early. The second alarm companies had over ten minute travel times to [the fire location].
- Accountability and use of the PAR Tag system must be in place at all times 24/7, 365.
[Print contained in squared brackets denotes editing by the reviewer.]

Report Number: 08-079

Report Date: 02/10/2008 0129

Demographics

Department type: Paid Municipal

Job or rank: Safety Officer

Department shift: 24 hours on - 24 hours off

Age: 34 - 42

Years of fire service experience: 0 - 3

Region: FEMA Region IV

Service Area: Urban

Event Information

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

Event date and time: 08/15/1996 1100

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event: Clear and Dry

Do you think this will happen again? Yes

What were the contributing factors?

- Fatigue
- Procedure
- Command
- Decision Making
- Staffing

What do you believe is the loss potential?

- Minor injury

Event Description

Prior to making the scene of what became a 2nd Alarm fire at a strip shopping center, our company had been directed to "move-up" to cover another station, but had then been dispatched to an MVA involving rescue. After extricating and assisting in treating and loading several patients, we returned to service and were advised to report to staging at the fire scene. The businesses involved were a general merchandise outlet, a gun shop, and a carpet warehouse in that order toward the Bravo sector of the shopping center. They were connected with another series of businesses toward the Delta side. All three of these businesses were separated by standard stud walls covered with sheetrock. A common hallway at the rear of the gun shop connected the merchandise outlet, where the fire originated, with the carpet warehouse. The construction type was a one-story ordinary with metal truss roofing, the portion of the building on fire was roughly 140'x 70'. The weather was sunny and 95 plus degrees.

As firefighting had been taking place for almost an hour by this time, we thought we would be on standby until overhaul, but after a few short minutes, we were told via radio to report to Operations for an assignment. After relieving one company on a hose line in the Alpha sector for approximately 10 minutes, we were redirected to the Bravo side by face-to-face orders. On our arrival at the carpet warehouse, another Chief advised our Lieutenant that he wanted us to advance a 2-½ inch line into a side doorway to see “if we could check the advance of the fire.” My partner, who was the nozzle man, and I advanced the line approximately 10 – 12 feet inside the structure, which had heavy smoke with zero visibility. We positioned the line in several directions but it was readily apparent the fire conditions were not changing and we were ordered out. We were then advised to use the line to “cool the interior” by placing it at the doorway. I then relieved my partner on the nozzle after doffing my SCBA. He rejoined me on the line after doing the same with his equipment. After an unknown but short period of time, our 4-man crew felt a rush of heat and was knocked backwards while being consumed by smoke as the entire roof (60’x 70’) over the carpet warehouse collapsed. Fortunately, I managed to close the shut off on the 2 ½ while my Officer was dragging me backwards and dropped the line away from the building. Other than a very superficial burn to my right cheek, no one was injured. We were sent to Rehab immediately after we confirmed no one else was trapped or injured.

We then assisted with overhaul and returned to service after approximately 45 minutes.

Lessons Learned

I had only been riding fire suppression for slightly over a month; I only knew to communicate with my partner, keep my bearings, but I don’t believe we even taught situational awareness as we do now. I followed the lead of my partner and relied on him alone to move us and get us out. I know I didn’t verify the wall closest to where we entered the structure and would have been somewhat “blind” or disoriented at best on a way out if something had happened to him.

Staffing was also an issue due to the weather and fire conditions. By the time we arrived, most of the initial companies were becoming exhausted and Rehab at the time was limited to water and Gatorade with no true medical evaluation.

From a Command perspective, we later learned that a company had entered the building where we went in and had proceeded with clear conditions down the hallway to the compartment of origin, but had been pulled out over concern that the gun shop exposure was a danger. As their Officer related to us, they could have held the fire at that location and would have prevented extension to the warehouse. He could not believe they sent us back in almost 75 minutes later after fire conditions worsened, especially as the gun shop situation was still present and given the building construction and length of time it was exposed to heavy fire and heat.

Needless to say, this affected the manner in which I taught later as an Instructor. Size-up is everybody's business and you should never rely on or assume your

more experienced partner will "get you out." Situational awareness and CRM are a must. Having an IC is good, but relying on him/her alone to make all decisions or to "see" everything should not be assumed or taken for granted.

Report Number: 08-577

Report Date: 11/07/2008 1553

Demographics

Department type: Paid Municipal

Job or rank: Fire Chief

Department shift: Other: 10 hr. days, 14 hr. nights (3 days on, 2 off, 3 nights, 3 off)

Age: 43 - 51

Years of fire service experience: 17 - 20

Region: FEMA Region II

Service Area: Urban

Event Information

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

Event date and time: 11/05/2008 0400

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?

- Situational Awareness
- Command
- Training Issue
- Communication
- Accountability

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description

Crews were fighting a fire in a four unit rowhouse/townhouse, wood-frame dwelling. Fire was visible from the C side (exterior). Crews reported fire in walls and ceilings on first floor and fire was moving up to the second floor. Initial crews were containing the fire, while an additional crew moved to the second floor for reconnaissance and search. When the reconnaissance crew reached the second floor, 2 members (a lieutenant and a firefighter) entered a bathroom that was located directly above the fire. Almost immediately upon entering the bathroom, a 6' to 7' section of the bathroom floor collapsed with the lieutenant falling through the floor. The lieutenant was able to catch himself on a floor joists and

nearby debris. As the floor collapsed, the firefighter jumped into a tub and did not fall through the floor.

Immediately upon falling through the floor, the lieutenant called a "mayday" and provided a clear and concise report detailing his unit, his location, the situation, and his immediate needs. Operations acknowledged the mayday, quickly confirmed the situation, and deployed the RIT team to the location of the trapped lieutenant. Simultaneously, command called for an additional alarm to stage nearby. Upon hearing the mayday and receiving associated information, a firefighter operating in the exterior of the structure notified two additional firefighters that the lieutenant had been seen operating in the area of a second floor window. A ground ladder was raised to the window and several firefighters helped the lieutenant extricate himself from the collapsed floor.

Within a minute or two from the time of the mayday call the lieutenant had been extricated and self-evacuated from the structure. Immediately upon hearing that the trapped lieutenant had been located, extricated, and removed from the building, command removed all personnel from the structure and ordered a PAR. The PAR revealed that all members were accounted for and firefighting operations commenced. Soon after the incident, the fire was knocked down and placed "under control." Meanwhile, the lieutenant and firefighter involved in the collapse were examined by an ambulance crew at the scene and no injuries were observed.

Lessons Learned

In this case, a second alarm assignment was operating at the scene because of the large size (30'x100') and construction type of the structure. This assured an adequate number of firefighters on scene to address any problems. Proper staffing played a major role in the successful outcome for the mayday situation and for fire control.

Upon a post incident critique of the event, many factors were attributed to a positive outcome in what could have been a tragic situation. The factors which played a major role in this "successful outcome" are: proper use and staffing of ICS functions (Command, Operations, Safety, RIT), early recognition of significant risk potential (a second alarm was summoned very quickly), coordinated fire attack, ventilation and reconnaissance, and training.

The fireground was very organized and calm prior to the mayday/collapse and remained so (as best as can be expected) while mayday operations were being conducted. Great credit should be given to the lieutenant who immediately recognized his predicament and instantly called a mayday. He provided exactly the type of information to Command/Operations which contributed to a quick rescue.

Report Number: 06-111

Report Date: 02/20/2006 2225

Demographics

Department type: Volunteer

Job or rank: Other: Training Officer

Department shift: Respond from home

Age: 52 - 60

Years of fire service experience: 21 - 23

Region: FEMA Region IV

Service Area: Urban

Event Information

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

Event date and time: 06/20/1984 1430

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Uncertain

What were the contributing factors?

What do you believe is the loss potential?

Event Description

Our department was called out to a double wide mobile home fire. There were three of us that responded. I was Chief at the time. We found the structure involved in the front with flames coming out of the front windows. We charged a 1 3/4" line and began to knock down the fire. We had been in the defense attack mode about 15 minutes, when I decided to walk around to the rear while the two firefighters continued to battle the blaze in front.

At the rear of the structure about 6 ft. from the rear wall, was an 8 ft. propane tank. What we did not know was that the fire had burned through the rear wall and was rapidly heating up the propane tank to the point that the water that had fell into the valve containment bowl on top of the tank was boiling like a tea kettle. I had no idea why the pressure relief valve had not functioned, but I knew that we were very close to leaving this world. Needless to say we immediately began to forget about the structure and started to cool the tank. At that time I had attended two classes from the state fire academy that amounted to introduction to basic firefighting. However, my instructors had repeatedly stressed how important it was to do a walk around size-up. I had failed to do that and it almost cost our lives.

I am now a state Fire Academy certified Level two entry firefighter with 23yrs. experience. As Training Officer for our department, I tell our firefighters that unless they have the ability to see through structures, they had better be doing a walk around size-up. In my opinion, one of the most important aspects of any kind of emergency is situational awareness and in that incident I completely lost sight of that. Having looked at the results of the reports that were sent in by other departments' near-miss incidents, I was stunned to learn that the main contributing factor in the majority of those incidents was the same as our incident, situational awareness.

Lessons Learned

Never ever forget to do a walk around size-up and stress to every firefighter in your department that overall safety of the incident is everyone's responsibility. If someone forgets to do a size-up, bring it to the IC immediately and if that doesn't work, then do it yourself. After a tragedy happens it is too late to start pointing fingers at other firefighters for failing to properly secure the scene. After all, it may be the last time that you ever have a chance to do anything!!!

Report Number: 07-761

Report Date: 03/02/2007 0830

Demographics

Department type: Paid Municipal

Job or rank: Battalion Chief / District Chief

Department shift: 24 hours on - 48 hours off

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region X

Service Area: Urban

Event Information

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

Event date and time: 02/27/2007 2032

Hours into the shift: 13 - 16

Event participation: Witnessed event but not directly involved in the event

Weather at time of event: Clear with Wet Surfaces

Do you think this will happen again? Yes

What were the contributing factors?

- Situational Awareness
- Teamwork
- Human Error
- Individual Action

What do you believe is the loss potential?

- Minor injury
- Lost time injury
- Life threatening injury

Event Description

Companies responded to a reported apartment fire. The fire was in a second floor unit in a two-story, wood frame fourplex. Bystanders reported that the occupant was still inside the involved unit. The initial incident commander was a firefighter acting in capacity as a company officer (this was his first fire in this position). The size-up report was fragmented and the initial IC's stress was evident in his tone of voice. Due to the location of the incident, the second and third arriving engines, truck company, and two chief officers arrived in short order behind the initial engine company. The initial IC quickly transferred command to the first arriving chief and went to work with his crew. The IC ordered the truck company to place

a ladder to the second floor unit for egress. After the fire was knocked down, the IC ordered the truck to check for extension in the void space below the roof.

In repositioning the ladder from a second floor balcony to the roof, the truck crew failed to ensure that the dogs on the fly section were locked prior to lowering the ladder to the roof and did not tie the halyard. The company officer climbed up the ladder and when he reached the middle of the fly section, the fly began to retract. The firefighter at the butt of the ladder grabbed the halyard and advised the company officer to go to the roof or come down quickly. The company officer proceeded to the roof (it was closer) and the crew locked the dogs and tied off the halyard.

Lessons Learned

Excitement in the size-up report impacts on all companies at the incident. The fragmented report and excitement in the initial IC's tone of voice created undue stress in the other responders, which impacted their performance.

Even experienced crews can make mistakes, particularly when under stress. It is critical to over train on routine skills such as communicating size-up information and deployment of portable ladders to reduce the probability of error under high stress situations.

In the case of the initial IC, the AIC has received coaching on how to build proficiency in radio communication (practice, practice, practice).

In addition, there were at least four opportunities to trap the error of failing to lock the dogs. a) The firefighter on the butt should have felt the dogs lock when extending the fly. b) The firefighter on the beam should have advised the firefighter on the butt "dogs locked" when the ladder was extended to the correct height. c) The firefighter on the butt should have asked if the dogs were locked if the appropriate verbal feedback was not received from the firefighter on the beam. d) The company officer should have checked the dogs when climbing past them. Fortunately, the error was mitigated by the quick thinking firefighter who manually restrained the halyard and stopped the fly section of the ladder from retracting.

Information on this near miss incident is being communicated to the members in the context of a crew resource management bulletin and built into future ladder training to illustrate how errors can be prevented, trapped, and mitigated.

Report Number: 08-270

Report Date: 05/22/2008 1246

Demographics

Department type: Paid Municipal

Job or rank: Lieutenant

Department shift: 24 hours on - 24 hours off

Age: 34 - 42

Years of fire service experience: 14 - 16

Region: FEMA Region VII

Service Area: Urban

Event Information

Event type: Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc

Event date and time: 12/12/2007 1250

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

Do you think this will happen again?

What were the contributing factors?

- Situational Awareness
- Weather

What do you believe is the loss potential?

- Life threatening injury

Event Description

I responded as the company officer on an engine company to a report of light smoke in the basement of a single family dwelling. This event occurred during a time when the city had suffered a major ice storm in the area. The storm had knocked power out to most of the citizens for a week. This event occurred during that week.

Upon arrival, I did a three side size up. I saw the B side driving down the road and saw the A side as I pulled up. I checked the D side after I got off the apparatus. There was nothing showing. The occupants met us outside and were not stressed about matters in the slightest. I immediately went into "nothing showing" mode and did not check the C side of the structure.

Investigating the area, we found a water line on the wall in the basement spraying water out of a joint. The line was covered by a towel and there was about an inch of water over the floor of the basement. There was also a slight haze of smoke visible. During the investigation, we asked about the resident's power status. They stated that they had not had power for about 3 days now. No source of the smoke could be immediately found so I turned my attention into stopping the water flow. I asked that the street valve be shut down. Another officer stated that the line I saw inside the house should be the shutoff line for that structure. The resident confirmed this. I removed the waterlogged towel from the line and saw a scorch mark on the towel. I remember thinking it was odd that the towel was scorched but I didn't put 2 and 2 together immediately. I then reached up to the valve to shut it off and noticed that the water was flowing out of the supply side of the valve and that it was already shut off. I remember thinking that was odd as well but then my brain thought that maybe the valve was stuck so I grabbed the handle.

If I had checked the C side of the structure, I would have seen a neighborhood feeder transmission line lying over the metal roof of the back porch of the structure. Touching the handle gave me quite a shock knocking me backwards into the wall behind me. My shoulder, bicep, and wrist were all sore and cramped for about a week after the incident.

Afterwards, we found out that the electric company was turning lines back on without checking if they were down first. This line was re-energized and its power went through the plumbing. The energy had melted the solder on the joint to the valve. The owner had just placed the towel over the leak and had not received a shock at all.

Lessons Learned

A 360 degree size up is important even when there is nothing showing upon arrival. You may find other items that could endanger your life or the lives of your fellow firefighters.

Even though the situation looks safe and easy, it might not be.

Report Number: 08-310

Report Date: 06/25/2008 0109

Demographics

Department type: Training Academy

Job or rank: Fire Fighter

Department shift:

Age:

Years of fire service experience:

Region: FEMA Region VIII

Service Area:

Event Information

Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.

Event date and time: 06/21/2008 0000

Hours into the shift:

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Yes

What were the contributing factors?

- Situational Awareness
- Communication

What do you believe is the loss potential?

- Life threatening injury

Event Description

I am currently in a fire academy. We were doing a live burn exercise and my partner was on the nozzle. The instructor ordered us to find the stairs. Because of the pre-planning, I knew exactly where the stairs were, my partner did not. I tried to my fullest capabilities to try to tell him to go left towards the stairs, but he went right. My partner then started to panic to the point that the instructor had to calm him down. Once we obtained control over the situation the instructor ordered me to take the nozzle. I went up the stairs to check for fire, there was none. The instructor told me to come back down the stairs to find the egress. Just after that command, my partner pulled back on the hose, thinking I was heading back down the stairs. This caused the nozzle to pull back from my hand. This action resulted in my regulator tube becoming caught on the lever of the nozzle. This in turn started to pull my SCBA mask to the side of my face. This potentially

could have pulled me down the stairs or rip the whole mask off my face. Both can obviously result in serious injury or death. My partner suddenly heard my command to stop so I was able to become free.

Lessons Learned

There are three lessons that I specifically learned from this.

Number One: Pre-planning and scene size-up are HUGE. You can't rely on everyone else's scene size-up; always make a personal one. I knew where the stairs were because of my personal scene size-up, where I was able to redirect my partner.

Number Two: For any operation to be successful there must be great communication. Always keep visual, physical, or verbal contact at all times. Without good communication between my partner and myself, my partner began pulling on the hose before I was ready. This may have resulted in a fall down the stairs due to a loss of balance from the hose being pulled or my SCBA could have been completely ripped from my face.

Number Three: Keep good control of equipment at all times. Losing all control of the nozzle could have resulted in serious injury.

Report Number: 08-642

Report Date: 12/08/2008 1533

Demographics

Department type: Volunteer

Job or rank: Fire Chief

Department shift: Respond from home

Age: 34 - 42

Years of fire service experience: 21 - 23

Region: FEMA Region II

Service Area: Suburban

Event Information

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

Event date and time: 02/09/2003 1310

Hours into the shift:

Event participation: Witnessed event but not directly involved in the event

Weather at time of event: Clear and Dry

Do you think this will happen again?

What were the contributing factors?

- Individual Action
- Situational Awareness
- Communication
- Accountability
- Staffing

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description

Brackets [] denote identifying information removed by the reviewer.

On February 9, 2003 at 1310, hours the [department name deleted] responded to a working structural fire at a private residence. The first arriving units observed fire venting from a window on the first floor of the structure. Hose and search teams entered the building. The two member search team proceeded to the second floor, believing that there might be victims trapped there. The fire suddenly extended up the stairs to the second floor as the hose crew encountered difficulties charging the hose line. The search team was quickly overrun by the

fire conditions. Attempting to seek refuge inside a room, they found that all the doors were locked trapping them in the hallway. Although separated, they both eventually jumped through a window at the end of the second floor hallway. They were transported to a burn center for treatment.

Lessons Learned

Brackets [] denote identifying information removed by the reviewer.

Apparatus Response:

Low staffing levels are commonplace in many volunteer fire departments. The number of volunteers available to respond to emergencies can vary significantly according to the day and time. This in turn, can have a significant impact on the amount of training and experience that responding crews possess. Tests conducted with the [department name deleted] indicated that staffing below a crew size of four can overtax the operating force and lead to higher losses. Likewise, an inexperienced crew might not be able to successfully perform the critical fireground operations that are expected of them. It is for these reasons, that most fire departments utilize some form of mutual or automatic aid from surrounding communities. Neighboring fire departments not only supplement local staff, but often provide specialized services such as RIT / FAST that are required during structural firefighting.

Initial Hoseline Operations:

The successful operation of the initial hoseline often governs the overall success of the firefighting operation, as many fires can be suppressed using only this initial hoseline. The hoseline must be fully stretched out to prevent kinking when charged. The nozzle must be opened to bleed out any air in the hoseline and to ensure adequate water flow prior to entering the structure. The hose crew should consist of at least four firefighters. One on the nozzle, one as a back-up with forcible entry hand tools, one to help stretch the hose into the structure and around corners, and an officer who guides the crew and monitors conditions/progress and radios messages to the IC. If the crew size is reduced or consists of inexperienced firefighters, the fire suppression operation can be hindered.

Searching Above Fire Floor:

As previously noted, fire will cause smoke, heat, and flames to spread upward and outward from their source. This creates a hazard for anyone operating above a fire and should be avoided unless the following actions are taken:

1. At least one ground ladder is placed to upper windows for emergency egress.
2. A crew with a fully charged hoseline is in place to control the fire.
3. Personnel are ready to perform ventilation to remove the smoke and heat.

Rescue, suppression, and ventilation operations must be strictly coordinated by the IC or operations officer. Communication must be maintained with personnel reporting their status, progress, and observations. Any changes in fire conditions or problems encountered while conducting these vital operations must be conveyed immediately to all those operating in the fire building. Failure to keep all members informed of changing conditions can, and often does, result in firefighter injuries and deaths. Search team staff should be equipped with hand tools that can be used for forcible entry and tools that can extend a firefighter's reach. These tools will allow even a limited number of personnel to conduct an efficient search.

Firefighter Survival Techniques:

No matter how cautious firefighters are, fires are dynamic and conditions can deteriorate rapidly. It is imperative that firefighters be prepared for dire situations. Fire departments need to train firefighters to deal with the possibility of becoming lost or trapped. While it is difficult to simulate a training scenario in which a firefighter actually feels his/her life is threatened, creative, realistic and safe training exercises can be developed to help prepare firefighters for dire situations. Through repetitive training, firefighters can learn such emergency survival techniques as "skip-breathing" to conserve precious air supply, entrapment self-extrication techniques, wall breaching techniques, ladder escape "bail-out" methods and so forth. It is also important that firefighters be equipped with small items such as wire cutters, personal flashlights and personal lengths of rope or nylon webbing. Above all, firefighters must be conditioned to respond to individual emergencies calmly in order to make reasoned decisions. Firefighters must be taught that if they become lost or trapped the most important thing they can do is notify others of their plight and location as best they can. For this reason, every interior crew member should have a portable radio equipped with a sufficient number of operational frequencies and a dedicated command frequency. They should use a pre-determined emergency term such as "May-Day" to notify the incident commander of their situation. Finally, firefighters need to immediately activate their PASS devices manually so that rescue crews can locate them quickly.

Personal Accountability System: [name of stat was deleted]

The [state name deleted] require that fire departments utilize a two-tag accountability system. The first tag is placed by the FF on the responding apparatus. The second tag is given to a designated accountability officer prior to entering the IDLH. This system includes the use of PARs (Personal Accountability Reports) or roll-call sheets. All within the framework of the IMS that is required to be utilized at all incidents.

The [state name deleted] also requires communication between crews working inside the structure or hazardous area, company officers and the IC. Interior crews must keep company officers apprised of general conditions, what they are doing and where they are. At the same time, company officers responsible for crews must solicit information from their crews and pass it along to the IC or

planning chief. With proper two-way communication, everyone on the incident scene is cognizant of what each team is doing and generally has a sufficient idea of where they are, lessening the chance of firefighters freelancing.

Non-Use of Thermal Imaging Cameras (TICs):

The state supplied all [state name deleted] fire departments with one or more Thermal Imaging Cameras (TICs). Both the [names deleted] were the recipients of these cameras.

Fire department should routinely employ the TICs during various structural firefighting operations. TICs can be a valuable tool during initial and on-going scene size-up, especially when dealing with fires in wood frame structures. In these instances, the IC can gain valuable insight from the exterior as to the fire's location, size, and advancement through the structure. This activity should be performed before firefighters enter the structure to alert them of hazards and reduce risks.

TICs can also play a vital role during fire suppression operations. The TIC can reduce the time needed for interior crews to locate and extinguish the seat of the fire. The TIC can provide a means of identifying hidden areas of fire spread and aid in the recognition of deteriorated structural conditions.

The TIC must be an integral part of search and rescue operations for lost or trapped civilians and firefighters. The camera can help RIT / FASTs save precious time in locating and removing victims. While TICs must not replace time-honored skills, they are an important tool to make operations more efficient, resulting in a higher level of safety for firefighters. Just as firefighters equip themselves with a set of hand tools and flashlight, they must include the TIC in their cadre of tools every time they enter a situation where visibility is reduced. Fire departments must realize that the TIC is a versatile tool and continually train utilizing their TIC in various situations and operations. Practice will enhance firefighters' proficiency with the camera, allowing them to interpret the images it displays and to fully understand its capabilities and limitations.

Personal Alert Safety System (PASS):

PASS devices can save lives. Many departments still rely on PASS devices that must be activated manually, although newer technology automatically turns "on" an integrated PASS device upon turning-on an SCBA. The manually activated devices are acceptable by NFPA standards, but place a burden on the firefighter to remember to turn "on" the PASS device. Adding the human factor increases the chance for error. Fire departments should strongly consider upgrading their SCBA to those with automatic PASS devices. In any event, they must be provided, used, and maintained.

Tests conducted by the [department name deleted] yielded the following recommendations regarding the use of PASS devices:

- Test the PASS at least weekly, and maintain it in accordance with manufacturer's instructions.
- Conduct practical training with the PASS under realistic conditions.
- Check the PASS device calibration during training and return units for recalibration if necessary.
- Retrain every six months with PASS devices.
- Train firefighters to always turn on and test the PASS before entering a hazardous atmosphere.
- Train rescuers to listen for the distress sound by stopping in unison, controlling breathing, and lifting hood or earflaps away from ears.
- When a downed firefighter is located, turn off the PASS device or communications will be impossible.

Personal Protective Equipment (PPE):

Although PPE is designed to protect the firefighter from the products of combustion, the physical characteristics of the PPE cause it to lessen the mobility and dexterity of the firefighter. This is especially the case with firefighting gloves. They greatly interfere with the ability to perform fine motor skill tasks such as fastening buttons, clips, straps, and the like. Therefore, firefighters must be able to don / doff equipment with gloved hands.

Rapid Intervention Team (RIT) / Firefighter Assist & Search Team (FAST):

IMS regulations under [state regulation deleted] require that fire departments have a minimum of two fully equipped personnel ready to rescue distressed firefighters when operating in an IDLH atmosphere. A RIT or FAST can be composed of departmental or mutual aid personnel. It is important for the IC to request the RIT or FAST as soon as possible after dispatch to allow for the team to arrive quickly. Some fire departments have refined their response plans to dispatch a RIT or FAST automatically upon report of a working fire.

These teams are specially trained and equipped to deal with rescuing firefighters under the worst possible conditions. If this concept is adopted by the fire department, it is crucial that the members of the RIT or FAST obtain all necessary training and equipment. Other fire department members also need to be well versed in the duties, responsibilities and operations of the RIT or FAST and they must know what fire crews must do to support the team.

Evacuation Signal:

The [state name deleted] Fire Safety Commission is working toward approving a model emergency evacuation signal guideline as developed by the [state name deleted] Firefighter Safety and Health Advisory Council and the [state name deleted] Division of Fire Safety. It is anticipated that this guideline will become regulation in order to achieve statewide uniformity. It should be noted that the approved model is similar, if not identical, to that already utilized by most departments.

Building Characteristics:

Fires that occur in one and two family residences can be some of the most hazardous for firefighters to battle. These homes contain many items or conditions that can be dangerous. Some homeowners store a wide variety of hazardous materials in their homes, from chemicals to ammunition. Some also perform “illegal” structural alterations, such as adding bedrooms and knocking

out walls. Homes do not possess the same life safety or construction design features as commercial structures, nor are they subject to any regular inspections after occupancy. Firefighters must anticipate problems when responding to private residences.

Report Number: 05-337

Report Date: 07/08/2005 1146

Demographics

Department type: Paid Municipal

Job or rank: Captain

Department shift: Other

Age: 43 - 51

Years of fire service experience: 30+

Region: FEMA Region VI

Service Area: Urban

Event Information

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

Event date and time: 07/06/2005 2030

Hours into the shift: 13 - 16

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Yes

What were the contributing factors?

- Situational Awareness

What do you believe is the loss potential?

- Life threatening injury

Event Description

This fire was in a tire store with a small amount of smoke showing on location on the unburned side of the building. Firefighters attacked from the unburned side. As a safety officer I made a 360 survey of the building. I discovered the building walls expanding and contracting on the opposite side the building. The smoke conditions changed very rapidly from when entry was made in the structure. I went to command and the fire was changed to a defensive fire. All crews were called to exit the building. Within one to two minutes, the entire building was totally involved in flames. Luckily all firefighters made it out of the building in time before being caught in this flashover.

Lessons Learned

The lesson learned is that a survey of the entire building should be made before entry. This would allow a better size-up and a more educated decision in fire tactics on the fire ground.

Report Number: 08-104

Report Date: 02/21/2008 2058

Demographics

Department type: Volunteer

Job or rank: Deputy Chief

Department shift: Other

Age: 43 - 51

Years of fire service experience: 17 - 20

Region: FEMA Region I

Service Area: Suburban

Event Information

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

Event date and time: 02/17/2008 1755

Hours into the shift:

Event participation: Witnessed event but not directly involved in the event

Weather at time of event: Clear and Dry

Do you think this will happen again?

What were the contributing factors?

- Situational Awareness
- Accountability

What do you believe is the loss potential?

- Environmental

Event Description

Our fire department was dispatched for a possible structure fire in a 1 story commercial brick building after a passerby reported fire visible inside the structure with light smoke showing. The building was occupied by both a restaurant and a drycleaner. The first fire personnel on scene was a deputy chief who arrived within 2 minutes of the initial alarm, assumed command, performed a size-up, and communicated a working fire from the drycleaner occupied part of the building.

As a deputy chief and the department's safety officer, I arrived on scene, advised command I was the incident safety officer for the incident, and performed a 360 of the structure to identify any possible hazards. Upon my return to the alpha (A) side of the building, the truck company had forced entry to the structure with the engine company entering with a 1 1/2" line. There was a moderate smoke

condition at the time. The fire was located and confined to a commercial dryer. The building was ventilated with PPV and checked for extension.

This was the first fire that the department has had in quite some time. As I was checking I realized that our accountability procedures were not in place and that I had no reliable information on the number of firefighters in the structure. Not one accountability tag had been placed at the door. We have a two tag system where one tag remains on the rigs and one is left with an accountability officer at the door. Had the incident escalated into a major fire, the IC would have had limited information on the number of personnel inside of the structure.

Also, as the building was being ventilated and checked for fire extension there was still a light smoke condition inside of the structure. I observed 50% of the firefighters had removed their SCBA masks and walking around inside of the building. I notified the OIC of the interior to have all firefighters go back on air which they did. The building was then metered and elevated CO was detected. I believe that the excitement of the fire quickly caused the firefighters to ignore or forget the department's mandated SOPS on accountability procedures and our current policy on the use of SCBA during salvage and overhaul procedures need to be evaluated.

Lessons Learned

The lesson I learned was to make sure as the incident safety officer that if I was not able to tend to the tasks that I was responsible for that I should delegate those tasks to other personnel. While a 360 of the building is important, my biggest responsibility was for the accountability of the personnel entering the structure.

Report Number: 08-489

Report Date: 10/01/2008 1340

Demographics

Department type: Combination, Mostly volunteer

Job or rank: Fire Fighter

Department shift: Respond from home

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: FEMA Region IV

Service Area: Suburban

Event Information

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

Event date and time: 09/30/2008 0030

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?

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

What do you believe is the loss potential?

- Life threatening injury

Event Description

Upon arrival at a wood frame single-family structure fire, the front of the house showed smoke and flames coming from the basement. After a 360 walk-around, fire was showing on the main floor above the basement. A three-man team was deployed to the front door with a 1 3/4" handline and Thermal Imaging Camera (T.I. C.). After we made entry, we were faced with heavy smoke and very high heat. We had advanced the handline about 6 to 8', when the firefighter carrying the T.I.C. discovered the fire. We positioned ourselves at the opening to the kitchen and knocked down the fire. After knock down was achieved, the firefighter carrying the T.I.C. discovered the entire floor to the kitchen had burned out and collapsed. The firefighter carrying the T.I.C. advised the

nozzleman about the floor collapse and he advanced no further. The backup firefighter continued to advance. The nozzleman and the firefighter carrying the T.I.C. pulled the backup firefighter from advancing farther into the kitchen and the basement below.

Lessons Learned

- 1) Always assess conditions, actions, and needs when entering a burning building.
- 2) Always sound the floor for integrity.
- 3) Maintain crew integrity, stay calm and make sure crew is aware of the dangers in front of them.
- 4) Always conduct a 360 degree walk around of the structure to identify all exterior construction features.
- 5) Communication between team members is very important and acknowledgement must be returned.
- 6) If a T.I.C. is available it must be used in conjunction with the initial attack line.

Report Number: 08-632

Report Date: 12/06/2008 1247

Demographics

Department type: Volunteer

Job or rank: Safety Officer

Department shift: Respond from home

Age: 34 - 42

Years of fire service experience: 17 - 20

Region: FEMA Region III

Service Area: Rural

Event Information

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

Event date and time: 10/26/1984 2030

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?

- Other
- Human Error
- Teamwork
- Situational Awareness
- Protocol

What do you believe is the loss potential?

- Minor injury
- Other
- Lost time injury
- Life threatening injury

Event Description

During a barn fire, (no occupants or animals) mutual aid companies were dispatched. The department I was with responded as a water supply company. After two loads of water, I was asked to assume the role of scene Safety Officer. I immediately completed a 360 degree review of the scene and noticed a horrific operation on D side of the structure. A firefighter had placed a 24' extension

ladder to a window at the top of the structure. This ladder was approximately 8' to 10' short of its objective, and the ladder was placed directly below the window. The firefighter then attempted to use a 16" pike pole to reach his objective of clearing the window. This operation was stopped immediately. After conferring with the IC the concept of venting this opening was no longer necessary.

Lessons Learned

Improve the decision making process through training and communication. It was apparent that the training objectives were not met by the actions of some of the responders. (This is not reminiscent of all responders). Instituting standards for responders was initiated after this incident. Established training guidelines for responders and officers were started. Qualification levels for all departments in this Mutual Aid were discussed. Upon completion, the by-laws of the association will be amended

Report Number: 09-021

Report Date: 01/12/2009 2015

Demographics

Department type: Combination, Mostly paid

Job or rank: Captain

Department shift: 48 hours on - 96 hours off

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: FEMA Region X

Service Area: Rural

Event Information

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

Event date and time: 06/28/2008 0200

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?

- Communication
- Command

What do you believe is the loss potential?

- Life threatening injury

Event Description

During an initial size-up at a SF (structure fire), I completed a 360 walk-around of the fire building. While walking, I noted that the main electrical service line to the home had been burned off at the building. This was causing a significant electrical hazard. Following my size up, I transmitted by radio that incoming units need to avoid this hazard. I clearly stated the location of the hazard (D Side) and communicated that the hazard was completely blocking all access to that side of the building. I then requested acknowledgement of this transmission by all incoming units and received replies. Approximately 20 minutes later, a chief officer arrived at scene who had not been on the initial assignment. He conducted his own 360 and nearly stepped on the line as he was unaware of its presence.

Lessons Learned

Immediate flagging off of all on scene hazards must occur in spite of other command responsibilities, or assignments. Verbal or radio communications are not enough.

Report Number: 05-418

Report Date: 08/08/2005 2033

Demographics

Department type: Paid Municipal

Job or rank: Captain

Department shift: 24 hours on - 48 hours off

Age: 34 - 42

Years of fire service experience: 17 - 20

Region: FEMA Region VI

Service Area: Urban

Event Information

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

Event date and time: 05/02/2005 1600

Hours into the shift: 9 - 12

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

Weather at time of event:

Do you think this will happen again? Uncertain

What were the contributing factors?

- Individual Action
- Situational Awareness
- Communication
- Decision Making
- Training Issue

What do you believe is the loss potential?

- Life threatening injury

Event Description

Units responded to automatic alarm at church. While enroute, incident was upgraded to full alarm assignment on reports of fire in the "red brick" building. First alarm assignment consisted of Q(X), E(X), E(XX), E(XXX), E(IV), B(X). Q(X) and E(X) arrived first with nothing visible from large church. Q(X) took command and positioned on the south side and E(X) positioned on the North-side. On investigating E(X) reported working fire on second story and was stretching line to attack fire. Approximately one minute after arrival command requested second alarm and sent Q-crew in to assist with evacuation and

investigation. At two minutes in, command advised that the smoke condition had changed and warned interior crews that they possibly had a "well charged attic".

E(X) acknowledged and proceeded to attempt to locate and extinguish a fire located in one room (per radio report). At approx four minutes in E(XX) reported fire at an exterior porch and ceiling starting to come in on the north side. As B(X) arrived and assumed command, radio time was hampered with the request for additional resources such as police and our laundry list of things. At approximately six minutes in we had approximately three big boosters and one super booster operating. Units on the interior were requesting more pressure. At approximately eight minutes in, units were not reporting any progress and command was debating a switch to defensive operations. At this point a total of three maydays were transmitted by interior crews with members lost and off of hose lines. E(X) firefighter ended up outside the building and was out of air. His lieutenant was left in the building.

At this point the decision to go defensive was made, and all members were ordered out. E(XX), knowing the situation, decided to stay and was able to find E(X) lieutenant, who was lost and low on air. All companies were able to exit and after a large aerial assault the fire was brought under control.

Lessons Learned

1. Exterior smoke conditions must match reports from interior companies.
2. Consider the size of the structure when reading smoke conditions.
3. Sound your mayday as soon as you are in trouble.
4. Company officers must keep track of their crew members and their air supply.
5. Radio discipline (must be observed) from units not engaged in fire ops.
6. Support units can be called for on cell phones or included as automatic dispatch.
7. Fire is not 1 dimensional. If your lines are not reducing the volume, it may be beyond interior operations.
8. Thermal imagers are a must for every company on the fireground.
9. Sometimes the building will win.
10. Know what the fire is doing to the building and what the building is doing to the fire.

Report Number: 06-204
Report Date: 03/31/2006 2315

Demographics

Department type: Volunteer
Job or rank: Fire Chief
Department shift: Respond from home
Age: 34 - 42
Years of fire service experience: 17 - 20
Region: FEMA Region III
Service Area: Rural

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 03/08/2006 1245
Hours into the shift: 5 - 8
Event participation: Involved in the event
Weather at time of event:
Do you think this will happen again?
What were the contributing factors?

- Weather
- Other

What do you believe is the loss potential?

- Minor injury

Event Description

On March 8, 2006, the (Name deleted) Volunteer Fire Department in (City, State deleted) was dispatched at 1245 hours to a structure fire located on (Street Address deleted) in (City, State deleted). Firefighters were available at the station at the time of the call. The first due engine consisted of four personnel and arrived within three minutes of the call. Upon arriving on scene, moderate smoke was visible with no flame. A 5" supply was ordered and dropped off at the closet hydrant, about 300' away from the structure. Command was initiated and size-up conducted by me, Chief (Unit number and name deleted). A small amount of fire was showing from Side B near the kitchen area. A handline was ordered into place on Side A and waited for ventilation to take place. At that time, a window on Side B was ventilated releasing smoke and fire. While ventilation was being

conducted, a RIT line had already been put in place. The attack crew then entered the structure on Side A. Then words came across the radio, "We are backing out, too much fire, and heat." At that time I (name deleted), manning the RIT line, conversed with Assistant Chief (name deleted) as to where the fire was progressing from. Fire was pushing violently out of Side A as flashover conditions followed. At that time, Firefighter X (name deleted) and I ventilated two more windows on Side B, hoping to relieve more heat and smoke.

As ventilation was being performed, another attack attempt was made by Assistant Chief (name deleted) and Firefighter XX (name deleted). This time further progress into the structure was made. A second retreat by the attack team was necessary however, as flashover conditions again followed the attack crew out of Side A.

The RIT line was put in place to protect firefighters exiting the structure. Attack crews were then changed out and another window was ventilated on the A/B side allowing Firefighter X (name deleted) and me to enter the structure. As we went through the Side A door, we made an immediate left into the bedroom and encountered heavy fire conditions. We immediately tried to control the ceiling and drive the fire back to the seat, flowing 200 gpm. It was not working. The fire was simply eating up our fire stream. We retreated back to the Side A door with the fire chasing us out. Again, the RIT line was put into place helping us retreat.

As other apparatus and mutual aid companies arrived, two more windows were ventilated on Side B to make a total of six windows ventilated. At this time, Firefighter X (name deleted) and I re-entered the structure advancing to the same bedroom as before, this time gaining some excellent knockdown. We began to see sunlight coming through the windows and smoke and steam exiting out of the ventilated windows as we were knocking down the fire. As we progressed toward the seat of the fire, and to our amazement, a huge plume of black smoke again enveloped us with conditions deteriorating fast. We applied water to the ceiling, but were met with tremendous heat and smoke. An order was called from Command to evacuate. Fire was coming out of the Side A door and had us trapped. I then realized we were going to have to bail out Side B windows if we were going to make it. The RIT crew applied water again, driving the fire back and allowing us to escape with fire on our heels.

I conversed with Command at this time and the decision was made to go strictly defensive. A (name deleted) monitor was then put into place with a smooth bore tip at the Side A door. Knockdown of the total structure was achieved in about 5 minutes. (Name deleted) Fire Department, who responded mutual-aid, completed the overhaul tasks.

After overhaul was completed and equipment cleaned up Assistant Chief (name deleted) was transported to (name deleted) Hospital for dizziness and minor first degree burns to his ears and neck.

Due to the conditions and nature of the fire behavior, the (name deleted) arson investigator was called to assist with the investigation of the fire and cause.

Lessons Learned

The chain of events that took place on this incident was very unusual.

Lessons to be learned:

- 1) Do not assume that bread and butter fires will always be bread and butter easy.
- 2) Always expect the unexpected.
- 3) Never assume that this is just a routine fire. We assumed this was a routine 15 minute knockdown and overhaul.

A key also to remember, if you cannot darken the fire down in 30 seconds, another strategy should be deployed, like a BLITZ line. We as firefighters need to remember 1 1/2" and 1 3/4" handlines only go so far. Don't forget the tool box you brought with you.

Training of our personnel was by far the number one critical factor in preventing loss of life and more severe injuries. The recognition of flashover conditions and reading smoke ultimately saved lives. Firefighters must understand that training is the most important aspect of their job. Firefighting is high risk low frequency activity. Training is the key to our survival. Firefighters must know how to survive when conditions go bad. SCBA confidence, Mayday, and RIT training are all examples that need to be addressed on a continual basis to prevent panic.

Another key factor in this incident was radio communications. Fire officers must ensure that they are in constant communication with all personnel. Critical information to and from Command will ensure a safer fireground. Take your radio with you at all times and listen to it. It might just save your life.

Report Number: 07-1009
Report Date: 08/02/2007 1620

Demographics

Department type: Paid Municipal
Job or rank: Fire Fighter
Department shift: 48 hours on - 96 hours off
Age: 34 - 42
Years of fire service experience: 7 - 10
Region: FEMA Region VIII
Service Area: Suburban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 07/03/2007 1924
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?
What do you believe is the loss potential?

Event Description

I was the acting Lieutenant and my engine company was dispatched to a first alarm assignment for a confirmed structure fire. Upon arrival we encountered smoke showing for side A/B corner of structure and assumed a fast attack mode. While forcing the front door, smoke was visible on the first floor and in the basement windows. This indicated a possible basement fire. My partner and I advanced a 1 ¾" hoseline through the first floor kitchen area and down the stairs. At the bottom of the stairs we experienced a high heat and heavy smoke environment. We visualized the "glow" from the seat of fire approximately ten feet around a corner. After making multiple attempts to advance the hoseline, I called upstairs for more hose and instructed my partner to hit the fire from our location in order to cool the room. As I did this, I experience a brief (less than one second) activation of the vibralert on my SCBA followed by my mask "sucking" to my face. I activated my purge valve and got a small release of air followed by the mask sucking to my face again. Using my helmet mounted flash light I confirmed my SCBA pack gauge was reading 0 psi. I grabbed the coat of my partner and

relayed “no air, let’s go”. I then started up the stairs. After reaching the top of the stairs I turned and could not see him following me. I scanned the kitchen and caught the reflection of bunkers a few feet from me. I was unable to speak so I moved to the side of the basement doorway, crouched low to the floor and cracked my regulator in order to take in enough air to speak. I approached the officer from the rescue crew and relayed that I was out of air and my partner was in the basement alone. Once again my mask “sucked” to my face. I proceeded out the back door and removed my mask. I relayed that my partner was in the basement and the rescue crew was on their way to assist. I checked my pack and found my bottle stated I had approximately 2500 psi. My SCBA pack gauge showed 0 psi. I checked the bottle valve and found that it was closed. My partner later informed me that he heard me say “let’s go” but did not hear me say I had “no air”. He thought “let’s go” meant advance the hose. As a result he did not realize I had left the basement. I believe that while pulling hose around several corners and down the stairs, the hose was dragged over my bottle valve and shut off the valve.

Lessons Learned

Ensure the bottle is fully open prior to entering building. I know that I made multiple turns on my bottle valve and believed that the bottle was fully open. However, I cannot say 100% that the bottle was fully open.

Check the bottle valve. Turning the bottle back on would have solved the problem and I would not have had to exit the building.

Utilize the EBSS. This would have allowed me to exit the building with air and bring my partner with me at the same time.

Make note of means of egress as the hose is advanced. I knew that after reaching the top of the stairs, I had to make a left turn and the back door would be approximately ten feet away.

Report Number: 07-1152
Report Date: 12/06/2007 0134

Demographics

Department type: Paid Municipal
Job or rank: Fire Fighter
Department shift: 24 hours on - 48 hours off
Age: 25 - 33
Years of fire service experience: 4 - 6
Region: FEMA Region IV
Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 03/15/1985 0300
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?

- Situational Awareness
- Decision Making
- Teamwork
- Command
- Training Issue

What do you believe is the loss potential?

- Life threatening injury

Event Description

We were the first engine on arrival at a structure fire with heavy smoke showing from a large commercial ordinary construction (brick and stick) structure in downtown [location withheld]. The commercial structure was vacant and boarded up. We forced entry into the store front doors of the building and advanced a 1 3/4 handline into the structure. After advancing into the structure several feet with zero visibility another company on the scene pulled off the boards that sealed the front display windows of the vacant commercial occupancy. This provided the fire the oxygen it needed and fresh air to suddenly

ignite the entire interior of the building with us inside. The rapid explosion of fire blew all three of us out of the structure and into the street. Only one of us received any injury (minor burns).

This near miss was clearly a result of a lack of situational awareness, proper size up or reading of the conditions thereby resulting in a poor decision. The decision to advance a single line into a heavily involved structure and zero visibility without ventilation was an act of automation and not judgment. We saw fire and we went after it. This event was prior to the concept of risk management, reading the smoke, and a good working incident command system that exists today in our department. In the past, if it was on fire we went in even if bulldozers were parked outside the structure for a planned demolishing of the building the next day.

Lessons Learned

Risk management; a vacant structure not worth risking the lives of firefighters.

Situational awareness; a proper size up of the scene and greater experience by the initial attack crew would have told us that we had no business going into the structure with the fire conditions visible, much less with a single attack line.

Better coordination; our attack team should have been called out of the building prior to the removal of the boards sealing the store front windows, which resulted in us being blown out of the building by the force of the fire.

Better command presence at the onset of the working incident.

Report Number: 05-070
Report Date: 05/27/2005 1410

Demographics

Department type: Paid Municipal
Job or rank: Captain
Department shift: 24 hours on - 24 hours off
Age: 34 - 42
Years of fire service experience: 7 - 10
Region: FEMA Region IX
Service Area: Suburban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 03/31/1993 1435
Hours into the shift: 13 - 16
Event participation: Involved in the event
Weather at time of event:
Do you think this will happen again?
What were the contributing factors?

- Procedure
- Decision Making
- Training Issue

What do you believe is the loss potential?

- Life threatening injury

Event Description

We responded to a structure fire at an abandoned supermarket at approximately 2100. From previous pre-plans, we realized this market had a "Summerbell" type roof, which can fail early when exposed to fire. First arriving crew reported very light smoke visible with a small fire in the rear corner of the market. From what they saw, the fire had not yet spread to the upper levels of the structure. They advanced a hoseline to the interior to make an offensive attack. A second company (my engine) was assigned to back up the initial attack.

A third engine was assigned to exposures on the B side of the building. The officer on this engine company reported heavy smoke and flames that began to appear in

the area where a mezzanine existed over the fire area. With his knowledge of the structure he realized this could endanger the interior crews. He also realized they may be unaware that there was this much fire immediately above them. He relayed this information to the IC, who immediately ordered all interior crews out of the structure. An accountability check was made and the operation was changed to defensive. Within a couple minutes of crews leaving the building, the roof collapsed. Good communication and being aware of fire conditions definitely prevented serious injury and/ or loss of life.

Lessons Learned

This incident emphasized the need for good communications and the importance of everyone on the fireground being encouraged to provide input back to the IC when they note hazardous conditions. This was a good example of how tactics and strategy should be adjusted to rapidly changing fire conditions.

Report Number: 06-177
Report Date: 03/22/2006 1544

Demographics

Department type: Other: Fully paid special fire operations unit assigned to assist combination department
Job or rank: Captain
Department shift: Straight days (12 hour)
Age: 43 - 51
Years of fire service experience: 21 - 23
Region: FEMA Region IV
Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 02/26/2006 1316
Hours into the shift: 5 - 8
Event participation: Involved in the event
Weather at time of event:
Do you think this will happen again? Uncertain
What were the contributing factors?

- Situational Awareness

What do you believe is the loss potential?

- Minor injury
- Life threatening injury

Event Description

After a nineteen minute response, our fire unit consisting of 4 personnel arrived to a residential structure fire with heavy smoke visible. The structure was a 100 year old two-story structure of balloon frame construction. Our first assignment was to a designated staging area. Our second assignment from staging was to open the ceilings on the second floor and extinguish the fire located in the attic space. Before making our way to the second floor, I noted that the believed original point of fire origin located in the kitchen had been extinguished. Once on the second floor we met up with a crew of four firefighters from one of our County departments. All eight firefighters began to complete the assignment of pulling ceilings and extinguishing fire located in the attic. During this time, three

of the eight members of the original crew safely exited the structure via the stairwell. This left my crew of four and the line officer from the first crew still operating to accomplish the assigned objectives. The ceiling was opened and hose streams were being applied to the fire located in the attic space. Based on the use of a thermal imager it appeared we were accomplishing the objective of extinguishing the attic fire. After working for approximately 25-30 minutes my crew and the assigned line officer with low air alarms activated began to move to one of the two interior stairwells in order to exit the structure. When my crew arrived at the first stairwell, it was fully involved with fire and was not an option for exiting. Upon investigating the second stairwell, it too was fully involved with fire and was not an option for exiting. At that time, the Incident Commander determined that the fire had cut off the interior crews' means of egress and called for an evacuation of the structure by radio. He also ordered three blasts of an air horn based on County General Operating Guidelines. The Incident Commander ordered hand lines into positions to protect the remaining interior personnel and requested a ladder to be placed on the porch roof or overhang. All interior crew members and myself began making our way to the second story window and onto the overhang while the ladder was being positioned. There were five total personnel working on the second floor at the time of the incident. During our escape, the Incident Commander called for a Personnel Accountability Report (PAR) for the individual interior crew members. I and the other three members of my fire unit were accounted for. The fifth member of our crew, the acting line officer, was not located immediately. He had become disoriented and had made his way into a closet. He did re-orient himself, locate the escape window, and exited the structure via the overhang and ladder. The Incident Commander then accounted for all personnel operating on scene. The structure became fully involved approximately five minutes after the interior crew members had exited the structure.

Lessons Learned

The following lessons were learned:

1. Ladders should be in place close to or inline with second floor windows as a secondary means of escape. This should be done anytime operations are being completed on a floor above the ground floor.
2. Lack of personnel on scene to complete the assigned objectives. A full second alarm should have been dispatched to meet the needs of the incident. This should have been done early on in the operation.
3. The need to complete training on building construction and fire behavior. This could have assisted with the initial fire attack and overhaul operations, including the need to thoroughly overhaul the initial fire in the kitchen.
4. There was no assigned Rapid Intervention Crew due to a lack of manpower.
5. Personnel should be equipped and trained to use self-rescue equipment.

6. Training programs are needed to address firefighter safety such as calling a "Mayday" and command's response to "Mayday".

Report Number: 06-267

Report Date: 05/05/2006 1530

Demographics

Department type: Paid Municipal

Job or rank: Battalion Chief / District Chief

Department shift: 10 hour days, 14 hour nights (2-2-4)

Age: 43 - 51

Years of fire service experience: 27 - 30

Region: FEMA Region I

Service Area: Suburban

Event Information

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

Event date and time: 01/16/2006 1609

Hours into the shift: 13 - 16

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

Weather at time of event:

Do you think this will happen again? Uncertain

What were the contributing factors?

- Weather
- Decision Making
- Situational Awareness
- Protocol

What do you believe is the loss potential?

- Property damage
- Life threatening injury

Event Description

At 1609 hours, Monday, January 16, 2006 a passenger vehicle traveling west on (location deleted) struck (Department name deleted) Engine (X), and pushed it approximately eight feet sideways. The engine was parked as a blocking apparatus at the scene of a previous motor vehicle collision. There were nine personnel on the scene and none was injured. There was extensive damage to the right front and side of the apparatus.

The driver of the passenger vehicle was transported to a level one trauma center.

Fortunately, (this department) had instituted an aggressive General Operating Guideline [GOG] pertaining to vehicle placement at highway / roadway incidents. All personnel are required to wear either turnout gear or an issued safety vest.

Lessons Learned

Fortunately, the Department policy was followed, embraced, and applied as it pertained to vehicle placement at highway / roadway incidents.

We strongly suggest that ALL departments seriously consider adopting a very aggressive policy for roadway safety.

In conjunction, we challenge all officers and supervisors to practice roadway safety and to strictly enforce such a policy on ALL calls to which it even remotely applies.

Plans are being made to provide even more advanced warning for similar incidents, either signs or apparatus, personnel placed further from the incident depending on posted speed limits.

Report Number: 07-739
Report Date: 02/23/2007 2255

Demographics

Department type: Combination, Mostly volunteer
Job or rank: Fire Fighter
Department shift: Respond from home
Age: 34 - 42
Years of fire service experience: 21 - 23
Region: FEMA Region II
Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 08/09/2006 0430
Hours into the shift: 0 - 4
Event participation: Involved in the event
Weather at time of event: Clear and Dry
Do you think this will happen again? Yes
What were the contributing factors?

- Decision Making
- Command
- Situational Awareness

What do you believe is the loss potential?

- Minor injury
- Life threatening injury
- Lost time injury

Event Description

Upon arrival at a structure fire, I was assigned to perform search and ventilation on the first floor of the residence with a company captain. Equipped with a TIC, I noticed what appeared to be hot embers in the ceiling. I reported to the captain that I believed there was fire on the second floor. We attempted to locate the second floor. When we located the stairs, my low air alarm on my SCBA activated. I passed the TIC to the crew attempting the stairs and I exited the dwelling. As I exited the structure, the battalion chief assigned as the operations officer asked me about interior nature and conditions. I reported to him that the bulk of the

fire was extinguished on the first floor but that I believed fire had extended to the second floor.

As I changed my SCBA cylinder, I heard the IC place the fire under control. I figured that the crews made the second floor and determined that the fire had not extended, or if it had, the extension was minimal.

After changing cylinders, another firefighter and I were assigned to take a 1 3/4" handline to the second floor. Since I knew the location of the stairs, I led the other firefighter back into the dwelling. As I attempted to go up the stairs and got to the fourth step, I felt the stair begin to give out under my feet and I returned to the main floor. My partner exited the dwelling to report to the operations chief and I reported to the interior battalion chief the fact that we could not make the second floor.

A few minutes later, the incident commander ordered all personnel out of the dwelling. After making sure all interior personnel were notified about the evacuation, (the IC did not activate the evacuation signal) the interior battalion chief and I exited the residence.

As I exited the residence, I saw heavy fire conditions from second floor windows and from the roof. I later learned that the crew attempting to make the second floor discovered the unstable steps; however, this information was never fully communicated throughout the chain of command.

Lessons Learned

Interior conditions and structural conditions need to be relayed to all personnel operating in and around the structure and especially the command personnel. The operations sector, interior sector, and incident commander need to communicate better so that all pertinent information is relayed up and down the IMS system.

Report Number: 08-121

Report Date: 03/02/2008 1133

Demographics

Department type: Combination, Mostly paid

Job or rank: Training Officer

Department shift: 24 hours on - 48 hours off

Age: 34 - 42

Years of fire service experience: 21 - 23

Region: FEMA Region III

Service Area: Urban

Event Information

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

Event date and time: 07/02/2005 1700

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear with Wet Surfaces

Do you think this will happen again?

What were the contributing factors?

- Situational Awareness
- Training Issue

What do you believe is the loss potential?

- Minor injury
- Life threatening injury
- Lost time injury

Event Description

We responded to a reported structure fire in a residential structure. The first arriving engine reported heavy smoke in an approximately 6,000 square foot, two story house. I arrived shortly after the first engine and as other apparatus arrived they were assigned tasks. There was an IC in place, accountability in place, and fireground communications on a dedicated TAC channel. There was a primary and secondary water supply established and two aerial trucks positioned for a defensive attack if needed. About ten minutes into the fire, the IC asked for a progress report. Interior crews reported some progress. They were operating two 1 3/4" handlines on the second floor at the top of the stairwell. About 15 minutes

into the fire, a significant structural collapse occurred. An emergency evacuation order was declared on the TAC and Dispatch channel, secondary emergency evacuation signal (apparatus horns sounded) was given, and radio confirmation was received. Crews were removed and an accountability check was OK. The structural collapse was a large section of masonry chimney that extended past the roof line, but was supported by a 2x4 frame underneath the roof. The chimney was for aesthetics only, not a function chimney. The large piece fell into the garage where it smashed a late model Cadillac down to the concrete slab like it was a beverage can. If the chimney had fallen in the other direction, it would have collapsed directly where the crews were operating. It is unlikely any of them would have survived the impact.

Lessons Learned

Lessons learned: Try to identify these structures in their construction phase. Our department is considering a visible marker to indicate structures with these features. It is difficult to identify real chimneys from these "fake" ones post construction. We are also working with plans review and the fire marshal's office to receive notification of these structures. This will be entered into our dispatch program.

The owner of the home rebuilt the home after the fire. I had a chance to speak to him after the fire and we discussed the potential for significant loss. The new home does not have the chimneys.

Report Number: 05-658
Report Date: 12/15/2005 1055

Demographics

Department type: Combination, Mostly paid
Job or rank: Fire Fighter
Department shift: 10 hour days, 14 hour nights (2-2-4)
Age: 52 - 60
Years of fire service experience: 24 - 26
Region: FEMA Region III
Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 12/02/2005 2200
Hours into the shift: 5 - 8
Event participation: Told of event, but neither involved nor witnessed event
Weather at time of event:
Do you think this will happen again? Uncertain
What were the contributing factors?

- Accountability
- Decision Making

What do you believe is the loss potential?

- Life threatening injury

Event Description

The response was for a structure fire at an industrial warehouse storing vinyl cloth mesh. The sprinkler system was activated. A crew of three advanced a hand line to the top of the third floor stairs, the location of the fire, and found that they did not have enough hose to advance further. In an attempt to find the source of the fire, they abandoned the nozzle and proceeded through the dense smoke. At this point one individual became separated from the other two. Disoriented, he became low on air, and, somewhat excited, called for help.

The two remaining crew members began to search right. Among the pallets of stored screen, they also became disoriented. It must be noted here that even

though the department has an accountability system in place it was not employed at this incident. Additionally, there was no RIT designated for the incident.

In what can only be described as an "ad lib" effort, the firefighter's local union president, who was off-duty and in a suit and tie, was on the scene when this situation transpired. He asked the pump operator, the only firefighter available, to pack up and attempt to locate the lost three. This FF did pack up and went in alone, followed the hoseline and got to the top of the third floor stairs where he "yelled" for the firefighter so that they could come to the sound of his voice.

Another note here, this department has five thermal imaging cameras, none of which were used nor seem to have even been considered to locate the lost FF's.

This situation had the very real potential for at least four fatalities and possibly more. Accountability was ignored; available equipment was not employed and basic safety measures every FF learns in training doesn't seem to have even been considered.

Lessons Learned

Suggestions for preventing this in the future are actually very apparent:

- An accountability system must be used.
- A rapid intervention team has to be in place even if it means special calling another engine or mutual aid.
- The safety basics learned in Firefighter I sessions cannot be ignored no matter how confident one might be in their ability.

Report Number: 07-890
Report Date: 05/01/2007 0255

Demographics

Department type: Volunteer
Job or rank: Fire Chief
Department shift: Respond from home
Age: 25 - 33
Years of fire service experience: 17 - 20
Region: FEMA Region III
Service Area: Rural

Event Information

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

Event date and time: 04/28/2007 0115

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event: Cloudy and Rain

Do you think this will happen again? Yes

What were the contributing factors?

- Situational Awareness
- Command
- Accountability

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description

We were dispatched to assist at a structure fire with a mutual aid department. Our department was sent for RIT & tender operations. The RIT team arrived and staged at the A/D corner of the structure.

Our RIT did a 360* of the building, set ladders checked conditions, number and locations of crews working and stood ready. About 20 minutes into the response, crews lost water for a short time and were forced to retreat. After water supply was re-established the crews made a second aggressive attack.

After about 10 minutes into the second attack, the conditions rapidly deteriorated. After a quick consult (less than 20 seconds) with command the evacuation order was given and air horns sounded. Crews were attempting to retreat when there was a flash over. The RIT was activated due to lack of accountability of two crew members.

The RIT made their way into the 1st floor, did a quick search, found one firefighter wandering in the first floor hallway dazed and confused. He was assisted to the front door and handed to waiting firefighters from the RIT support. The crew then made their way to the second floor landing which was the other firefighters last known location. Following the hose line, there were no other firefighters located. The RIT was cut off by fire that was coming now from a first floor room across a ceiling and then across the stairway.

The fire was hit from a hose line manned by additional RIT members and allowed other RIT members to egress to the front door. At this point it was determined that all firefighters were accounted for and out of the structure.

Lessons Learned

The function of a command staff was needed. The IC attempted to do too much and the span of control was too great. Other department chiefs assisted with getting this under control.

There was a need for a committed accountability officer. The accountability officer was not keeping accurate records of crew locations or job tasks. There was only an attendance system initially, until a new accountability officer was assigned. If the accountability would have been in place, we would have known there was only one firefighter missing. Make sure that all firefighters are trained with the knowledge of an accountability system.

Have all firefighters understand the RIT function and what the need of every firefighter is if the RIT is deployed.

There is no real way to change the fast changing fire conditions except to never do an interior attack with the risk of potential injuries of firefighters.

Report Number: 07-1105
Report Date: 11/01/2007 2048

Demographics

Department type: Volunteer
Job or rank: Captain
Department shift: Respond from home
Age: 34 - 42
Years of fire service experience: 17 - 20
Region: FEMA Region VII
Service Area: Rural

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 04/15/2006 1730
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
- Command
- Accountability
- Situational Awareness
- Decision Making

What do you believe is the loss potential?

- Life threatening injury

Event Description

We responded to a small house fire in town. We had good hydrants and proper water supply. The fire was in the attic. We had a quick response (four personnel) and started to make an interior attack on the attic. We needed more manpower to continue the attack, but we kept changing our bottles and going in until help arrived. Once I came out, I noticed no one was in command and several other volunteers from different agencies had arrived. I took command, but we do not have an accountability system in place (still don't) and I did not know who was

qualified to make entry. I am also a full time Captain in a near-by metro area. I assigned two companies to make entry and continue to pull ceilings and attack the fire. I also assigned vertical ventilation. One main problem was the construction of the house, it had three ceilings in it (drop ceiling, plywood, tongue and groove). We did not have RIT because no one had been trained in RIT yet. We did however have two-in-two out. About two hours into the fire we were doing overhaul operations when a crew of two in the living room were pulling a ceiling joist out (I don't know why) and the ceiling and roof collapsed on the two firefighters. About 10 people ran into the structure, some with SCBA's, some without, and started digging for the firefighters. At this time, it was light smoke and no visible fire. However, it was smoky enough that everyone should have been wearing an SCBA. It was complete dismay and loss of control. No matter what I (Command) said, people were out of control. Fortunately, we recovered our firefighters and they only received minor injuries.

Lessons Learned

1. Every fire department needs to use the Incident Command system.
2. Every fire department needs to have a working accountability system.
3. Use a trained Safety Officer.
4. If you run with mutual aid, you need to train together. Have some way to identify who is firefighter-I standard or who can and can't make entry.
5. Get rid of 10 codes
6. We need training on basic fire attack skills and overhaul.
7. RIT should be part of basic firefighter training.
8. Building construction classes
9. SOGs in place for accountability, safety, command system.
10. The good ole boys need to change their ways or get out, that's what is holding up our county, the old Chiefs that can't change with the times!

Report Number: 08-104
Report Date: 02/21/2008 2058

Demographics

Department type: Volunteer
Job or rank: Deputy Chief
Department shift: Other
Age: 43 - 51
Years of fire service experience: 17 - 20
Region: FEMA Region I
Service Area: Suburban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 02/17/2008 1755
Hours into the shift:
Event participation: Witnessed event but not directly involved in the event
Weather at time of event: Clear and Dry
Do you think this will happen again?
What were the contributing factors?

- Situational Awareness
- Accountability

What do you believe is the loss potential?

- Environmental

Event Description

Our fire department was dispatched for a possible structure fire in a 1 story commercial brick building after a passerby reported fire visible inside the structure with light smoke showing. The building was occupied by both a restaurant and a drycleaner. The first fire personnel on scene was a deputy chief who arrived within 2 minutes of the initial alarm, assumed command, performed a size-up, and communicated a working fire from the drycleaner occupied part of the building.

As a deputy chief and the department's safety officer, I arrived on scene, advised command I was the incident safety officer for the incident, and performed a 360

of the structure to identify any possible hazards. Upon my return to the alpha (A) side of the building, the truck company had forced entry to the structure with the engine company entering with a 1 1/2" line. There was a moderate smoke condition at the time. The fire was located and confined to a commercial dryer. The building was ventilated with PPV and checked for extension.

This was the first fire that the department has had in quite some time. As I was checking I realized that our accountability procedures were not in place and that I had no reliable information on the number of firefighters in the structure. Not one accountability tag had been placed at the door. We have a two tag system where one tag remains on the rigs and one is left with an accountability officer at the door. Had the incident escalated into a major fire, the IC would have had limited information on the number of personnel inside of the structure.

Also, as the building was being ventilated and checked for fire extension there was still a light smoke condition inside of the structure. I observed 50% of the firefighters had removed their SCBA masks and walking around inside of the building. I notified the OIC of the interior to have all firefighters go back on air which they did. The building was then metered and elevated CO was detected. I believe that the excitement of the fire quickly caused the firefighters to ignore or forget the department's mandated SOPS on accountability procedures and our current policy on the use of SCBA during salvage and overhaul procedures need to be evaluated.

Lessons Learned

The lesson I learned was to make sure as the incident safety officer that if I was not able to tend to the tasks that I was responsible for that I should delegate those tasks to other personnel. While a 360 of the building is important, my biggest responsibility was for the accountability of the personnel entering the structure.

Report Number: 08-124
Report Date: 03/03/2008 1746

Demographics

Department type: Combination, Mostly volunteer
Job or rank: Captain
Department shift: 24 hours on - 48 hours off
Age: 25 - 33
Years of fire service experience: 7 - 10
Region: FEMA Region IV
Service Area: Suburban

Event Information

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

Event date and time: 03/02/2008 0530

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?

- Situational Awareness
- Accountability
- Command
- Decision Making
- Communication

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description

While operating at a fully involved, two story 16 unit apartment building fire, two firefighters and myself were operating on the C/D corner of the structure. Due to water supply problems, we had shut down our line and stepped back from our position. The platform truck radioed that they were going to direct their stream to the C/D corner of the building. We immediately began walking towards the A

side of the building-just outside the collapse zone as we were along a tree line. Before we could make it to the front of the structure, the aerial master stream struck the brick veneer wall on side D and caused a collapse of the entire two-story wall. Several bricks landed around us as we missed being in the collapse zone by seconds. The time from the radio transmission to the movement of the master stream was less than ten seconds.

Lessons Learned

There was never any formal incident command established at this incident. The IC was roving all over the fire scene and was directly involved in operations. No safety officer or accountability system was ever established. Fire crews were freelancing all about the structure.

Our department was providing mutual aid at this incident. We were providing accountability for our personnel and had a designated safety officer for our area of operation.

The fire was considerably larger than our on-scene staffing could safely handle. Several neighboring departments commented that we should have had over 100 firefighter's on-scene. We were operating with less than 40 at a fully involved two story 16 unit apartment fire.

Communication between divisions was almost non-existent. The platform was unaware anyone was at the C/D corner, and we did not have time to tell them once they announced they were re-directing their stream. Fortunately, they did make the announcement and, although we had very little time to react, we were able to make it to safety.

Fortunately, there were no injuries in this situation or at this incident. The sheer size of this fire and the limited staffing, lack of command structure, lack of accountability, and lack of coordination between divisions could have led to another multiple firefighter fatality incident.

Report Number: 06-236
Report Date: 04/07/2006 1308

Demographics

Department type: Paid Municipal
Job or rank: Lieutenant
Department shift: 24 hours on - 48 hours off
Age: 34 - 42
Years of fire service experience: 11 - 13
Region: FEMA Region VI
Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 02/02/2006 2100
Hours into the shift: 21 - 24
Event participation: Told to and submitted by safety officer
Weather at time of event:
Do you think this will happen again?
What were the contributing factors?

- Equipment

What do you believe is the loss potential?

- Life threatening injury

Event Description

An Engine Company was dispatched to an apartment fire. Upon arrival, fire was showing and a bundle was deployed. The attack team charged the line and flowed water. When the nozzleman adjusted the fog pattern, the entire front end of the nozzle fell off. A second line was deployed and a successful attack was made.

The investigation identified the following:

The nozzle was an (brand and name deleted). The pattern collar at the front of this device is held in place with set screws. The set screws were missing.

Research found that this was the second failure in our department.

A safety bulletin was sent to all stations, which instructed personnel to immediately inspect all nozzle set screws. Multiple failures were identified.

Our equipment maintenance division then inspected every nozzle at every station, found more failures, and placed several nozzles out of service.

Following the inspections, all personnel were directed to do a better job inspecting and understanding ALL of their tools.

Notification was made to (manufacturer deleted).

Lessons Learned

1. All firefighters need to know the ins and outs of all the equipment that they use, especially, seldom used tools.
2. All firefighters need to have a plan B for every situation.
3. Develop a national fire equipment hotline.

Report Number: 06-575
Report Date: 11/20/2006 1640

Demographics

Department type: Paid Municipal
Job or rank: Fire Fighter
Department shift: 24 hours on - 48 hours off
Age: 52 - 60
Years of fire service experience: 17 - 20
Region: FEMA Region V
Service Area: Urban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 11/04/2006 1630
Hours into the shift: 13 - 16
Event participation: Told to and submitted by safety officer
Weather at time of event:
Do you think this will happen again? No
What were the contributing factors?

- Accountability
- Individual Action
- Human Error

What do you believe is the loss potential?

- Lost time injury

Event Description

We had a fire in a large storage building. The engine was assigned the task of pumping into the truck with a 3" line. The line was laid and after some problems at the hydrant, the pump operator introduced pressure into the pump. Another crew prepared a line for truck operations. In doing so, one of the crew members went to the side of the engine opposite of the pump panel and attempted to remove the cap of what he thought was a 5" discharge port. In reality, it was the 6" intake port with a Stortz 5" cap. The firefighter attempted to remove the cap but because of the pressure, he could not remove it. He asked for and received from the pump operator a Stortz wrench to remove the cap. The pressure blew

the cap off striking the firefighter who was removing the cap in the wrist area resulting in a fractured wrist. The officer moved toward the pump panel to question why a 5" cap was being removed for the 3" line when the cap blew. The officer did not realize the port was the intake. The officer was struck in the thigh by the cap and knocked to the ground by the force of the stream. He was 12 ft. away when the cap blew.

While the injured firefighters were being treated, the firefighter who was at the plug came up to the scene and placed a 5" hose onto the port. A 3" line was stretched to another engine supplying a deck gun. When the truck called for water, no one could determine why they were not receiving it. No one figured out the 5" hose to the truck was connected to an intake.

Lessons Learned

1. Firefighters and pump operators need to know their equipment.
2. Review this incident departmental wide. All members need to be aware that these things do happen. Officers need to make sure their crew members know the equipment and how it operates. When equipment is not functioning properly, members need to know how to troubleshoot the situation.
3. The Firefighter needs to be held accountable for his actions. This was a rookie mistake made by a Firefighter with considerable seniority. He needs extensive retraining and discipline.

Report Number: 07-911

Report Date: 05/11/2007 1556

Demographics

Department type: Other: Dispatch Center

Job or rank: Other: Shift Supervisor

Department shift: 12 hour days, 12 hour nights

Age: 34 - 42

Years of fire service experience: 17 - 20

Region: FEMA Region VII

Service Area: Suburban

Event Information

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

Event date and time: 12/02/2006 0610

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Cloudy and Sleet

Do you think this will happen again?

What were the contributing factors?

- Equipment
- Training Issue
- Procedure
- Accountability

What do you believe is the loss potential?

- Property damage
- Life threatening injury
- Other

Event Description

During a heavy Midwest ice storm, the power failed at the regional dispatch center shortly after shift change. A new generator was installed after a major electrical problem two to three years back. The new generator contained a number of safeties and a console on the inside of the dispatch center. The dispatch center has multiple redundant back-ups including a fixed generator, and

multiple UPS battery systems. The main public power failed and was noticed by on shift personnel. The generator failed to start due to a low coolant condition. A beeping was heard in the back room due to the second UPS about to fail. Each UPS provides between 5 and 15 minutes of back-up, depending on electrical load. Personnel went to the generator to find it not running. The code was found to be low coolant. Water was added to the generator to clear the trouble and a manual start sequence initiated. The generator started and provided back-up power relieving the UPS system

The enunciator in the building was found to have the volume control turned all the way down as well as a normal condition. The dispatch center is a regional center for 8 departments in a suburban area and dispatches about 26,000 calls annually.

Lessons Learned

Have training on new equipment and include factory personnel or representatives if at all possible.

Have personnel designated to monitor and maintain equipment.

Have written procedures for checking power equipment.

Have a troubleshooting guide for equipment in case of failure.

Do not rely on contractors to service equipment exclusively.

Report Number: 07-916
Report Date: 05/16/2007 1739

Demographics

Department type: Combination, Mostly volunteer
Job or rank: Fire Fighter
Department shift: Duty night (in-station)
Age: 16 - 24
Years of fire service experience: 4 - 6
Region: FEMA Region III
Service Area: Suburban

Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 05/13/2007 1407
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?

- Equipment

What do you believe is the loss potential?

- Lost time injury
- Minor injury
- Life threatening injury

Event Description

At 1407 hours on May 13th, 2007, I was staffing [Engine Number Deleted] as lead firefighter when a structure box was struck in our first due. [Engine Number Deleted] was committed to a gas leak call at the time of dispatch so we were the first in. Upon arrival, I found a two story single family structure with heavy fire showing from the two car garage on the baker side of the structure with some extension to the house itself on the same side. I pulled an initial 1 ½" attack line and flaked it to the end of the driveway in an attempt to knock the bulk of the fire (which had started in the garage) down and further prevent it from spreading to the structure any more than it had. With the arrival of other units, a 2 ½" line

was pulled and I entered the structure with the second hose team. I continued to suppress the fire in the garage from the interior of the house through an access door while the 2 ½" hose team waited for water. After the line was charged, I was told to move to the second floor as the fire had spread to the attic and living areas. I arrived at the second floor landing and was met with extreme heat and heavy smoke. At this point my mask filled with smoke and I began to feel it as I inhaled. I attempted to press my mask against my face while operating my handline with the opposite hand in an attempt to clear it but to no avail. I handed my line off to another firefighter and informed my captain I had to exit the structure. He assisted me to the front door where the RIT grabbed me and helped me to the driveway where EMS rehab took over care. I was subsequently treated on scene and then airlifted to a regional burn center for inhalation injuries and precautions. I was released that night after observation.

Lessons Learned

I learned once again that the equipment issued to you is only as good as the person operating it in the first place. Complacency can kill on this job and you have to work hard not to fall victim to it. I'd like to think that I did as I was trained and maybe this was just an unavoidable accident due to faulty equipment. Either way, your life depends on the training, equipment, and awareness you have on scene of any incident. Maybe if I had taken an extra second to double check the seal on my mask before entering the structure I would not have had to leave and the fire might have been contained a lot sooner, but unfortunately we'll never know. I'm just glad I had the presence of mind to get out when I realized there was a problem and not try to macho my way through it just to fight fire. In conclusion, if I were looking for a sure fire way to prevent this from happening again I would say that before you even get on duty; a full thorough check of ALL equipment is required and beneficial to you. Remember not to get the "big eye" when you see fire and check yourself and your teammate to assure you are both properly geared for the situation and there is nothing amiss.

Report Number: 07-1081

Report Date: 10/05/2007 0125

Demographics

Department type: Paid Municipal

Job or rank: Captain

Department shift: 24 hours on - 24 hours off

Age: 43 - 51

Years of fire service experience: 17 - 20

Region: FEMA Region X

Service Area: Urban

Event Information

Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.

Event date and time: 10/01/2007 1400

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

What do you believe is the loss potential?

- Lost time injury

Event Description

Our department did multi-company extrication training today using the new style Hurst cutter with the star grip control valve. I demonstrated and explained to the group to be careful while operating the tools with the star control valve near the seats because the tool could move and pinch the operators hand between the handle and the seat. About 30 minutes later, one of our firefighters was making a cut on the bottom of the "A" post in order to do a dash roll. The tool contacted the seat pinching his hand. He pulled his hand back, his glove remained stuck between the seat, and the tool and the star control valve was wedged against the seat with the cutter in the full on position. We had to shut down the pump, dump the unit, and then disconnect the tool. We used a spreader to get the cutter out.

Lessons Learned

The curved blade cutting tools and spreaders will move the tool while cutting and prying. These tools compress and displace the metal causing the tools to rotate slightly. When operating all hydraulic tools you must be aware of what the tool and the displaced metal is doing. Watch both ends of the tools. Make your cuts and prys slowly when in tight quarters. Extrication operations are dynamic and something is always moving while cutting and prying.

Report Number: 05-405

Report Date: 08/06/2005 2017

Demographics

Department type: Paid Municipal

Job or rank: Lieutenant

Department shift: 24 hours on - 24 hours off

Age: 34 - 42

Years of fire service experience: 21 - 23

Region: FEMA Region VII

Service Area: Suburban

Event Information

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

Event date and time: 05/09/2002 1230

Hours into the shift: 5 - 8

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Uncertain

What were the contributing factors?

- Human Error
- Communication
- Teamwork
- Individual Action
- Decision Making

What do you believe is the loss potential?

- Lost time injury

Event Description

My engine was moved to cover a city engine house. This department had suffered a double LODD the week before. While on the covering assignment, our guide rode in the officer's seat. We were on the street and received an alarm for wiring in a house. My firefighter and myself attempted to get dressed enroute to the alarm. Communication was a problem due to our guide not wearing the officer's headset. All the information I received was through my driver listening to the guide's portable radio. On arrival at the scene, our guide, a captain, jumped from the engine and headed for the house. His turnout coat was on and helmet in

hand, no bunker pants. I came off the engine with my SCBA over my right shoulder. As I did, I missed the step and my full weight landed on my left foot. I thought I had twisted my ankle. I finished the alarm, which turned out to be a minor fire, and returned to my assigned station. After returning, I took my bunker pants off and my foot swelled like a balloon. Not wanting to admit to myself I was hurt, I attempted to help my guys prepare for the fallen firefighters' funeral which was going to pass by this engine house. My firefighters said I

looked pale and was sweating profusely. They sat me down and an ambulance was called for ME! By not paying attention and trying to rush to stay with our guide, I spent the next nine weeks off work with a broken foot.

Lessons Learned

Pay attention. Look before you step. Our guide's idea of full PPE and mine were totally different. I was rushing myself to stay with him. Stay focused and stay calm. I became more excited by the fact that this city had just lost 2 brother firefighters and felt I needed to move faster to stay with that city captain.

Report Number: 07-943
Report Date: 06/05/2007 1608

Demographics

Department type: Paid-on-Call
Job or rank: Fire Fighter
Department shift: Straight days (8 hour)
Age: 16 - 24
Years of fire service experience: 7 - 10
Region: FEMA Region V
Service Area: Suburban

Event Information

Event type: Vehicle event: responding to, returning from, routine driving, etc.
Event date and time: 06/07/2013 1500
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?

- Decision Making
- Situational Awareness
- Human Error

What do you believe is the loss potential?

- Life threatening injury
- Minor injury
- Lost time injury
- Property damage

Event Description

I was driving the engine while returning to the station after being cancelled from a motor vehicle accident. We had responded to the far north part of our response district from our main station. On the way back we were heading down a moderate hill at driving speed when a vehicle pulled out in front of the engine. The vehicle stopped to wait for oncoming traffic to pass and to make a left hand turn south of the intersection where the vehicle was. I applied the brakes firmly

and the engine was slowing, but not fast enough since the vehicle that pulled out in front of me stopped to make a left turn. I had about 250 feet to make a choice that could result in nothing happening or possibly death.

If the vehicle in front of me would have started to make the turn I had planned to move slightly to the right towards the shoulder, which would have resulted in a partial rear-end collision to the passenger vehicle and pose the least danger to my crew. The other thought going through my head was to not continue on my path, which could have resulted in a T-bone type accident that most likely would have killed the driver of the passenger car. Under God's grace, the oncoming traffic could tell that something was not right and that the engine was not going to be able to stop and moved over to their shoulder. The car that had pulled out in front of me and then stopped to make the turn must have also noticed that something wasn't right and remained stopped. I chose to gracefully challenge traffic and pass the stopped car without incident, stopping approximately 150 feet beyond the intersection where the passenger car had stopped.

It is still unknown if vehicle maintenance was a factor in the incident. I truly learned the limitations of such large vehicles that day. It served as a reminder that at driving speeds it's all physics once something bad happens. I'm also glad that I remained calm during the incident. Had I panicked and made a sudden move I could have very easily harmed my crew or a civilian.

Weather was not a factor. Being more aware and anticipating a similar situation at that location is something to be learned.

Lessons Learned

I learned to be more aware of the situation ahead of me while driving. I truly learned the full limitations of braking systems on large vehicles. The engine involved does not have an auxiliary braking system on it. Adding a secondary braking system and decreasing speed will help avoid similar situations.

Pay attention and anticipate the unthinkable. Had the car that pulled out in front of me kept driving and not stopped I wouldn't be writing this.

Report Number: 08-489

Report Date: 10/01/2008 1340

Demographics

Department type: Combination, Mostly volunteer

Job or rank: Fire Fighter

Department shift: Respond from home

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: FEMA Region IV

Service Area: Suburban

Event Information

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

Event date and time: 09/30/2008 0030

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?

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

What do you believe is the loss potential?

- Life threatening injury

Event Description

Upon arrival at a wood frame single-family structure fire, the front of the house showed smoke and flames coming from the basement. After a 360 walk-around, fire was showing on the main floor above the basement. A three-man team was deployed to the front door with a 1 3/4" handline and Thermal Imaging Camera (T.I. C.). After we made entry, we were faced with heavy smoke and very high heat. We had advanced the handline about 6 to 8', when the firefighter carrying the T.I.C. discovered the fire. We positioned ourselves at the opening to the kitchen and knocked down the fire. After knock down was achieved, the

firefighter carrying the T.I.C. discovered the entire floor to the kitchen had burned out and collapsed. The firefighter carrying the T.I.C. advised the nozzleman about the floor collapse and he advanced no further. The backup firefighter continued to advance. The nozzleman and the firefighter carrying the T.I.C. pulled the backup firefighter from advancing farther into the kitchen and the basement below.

Lessons Learned

- 1) Always assess conditions, actions, and needs when entering a burning building.
- 2) Always sound the floor for integrity.
- 3) Maintain crew integrity, stay calm and make sure crew is aware of the dangers in front of them.
- 4) Always conduct a 360 degree walk around of the structure to identify all exterior construction features.
- 5) Communication between team members is very important and acknowledgement must be returned.
- 6) If a T.I.C. is available it must be used in conjunction with the initial attack line.

Report Number: 09-041

Report Date: 01/16/2009 2307

Demographics

Department type: Combination, Mostly paid

Job or rank: Captain

Department shift: 24 hours on - 48 hours off

Age: 34 - 42

Years of fire service experience: 17 - 20

Region: FEMA Region III

Service Area: Suburban

Event Information

Event type: Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc

Event date and time: 01/04/2004 0600

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event: Clear with Frozen Surfaces

Do you think this will happen again? Yes

What were the contributing factors?

- Weather

What do you believe is the loss potential?

- Life threatening injury
- Property damage
- Unknown
- Lost time injury

Event Description

I was responding as the department safety officer to an MCI involving several vehicles that lost control on black ice and crashed on a major interstate. As I was responding, I nearly crashed on a patch of invisible black ice.

I was approaching an office park complex when I began to make a right turn onto an off-ramp. As I was clearing the ramp, the rear end of my staff vehicle began to come around on me. I immediately let off the accelerator, remained calm, and steered into the skid keeping control of the vehicle throughout the limited

traction period. I was able to immediately get control of the vehicle but was thinking how close I was to being wrecked myself. This is not something I would want to explain as the safety officer.

One major reason for the positive outcome is that I prepared ahead in my mind for the eventuality of being on ice. I slowed my response speed because we had experienced sporadic icing in the county that morning. Other positive factors in avoiding a crash were light traffic conditions and many years of experience on winter roads. Take time and be aware of ever changing weather conditions.

Lessons Learned

When weather factors into your response, you must reduce the speed of your vehicle. This prevented serious injury potential and a crash all together.

Driver experience was a key to preventing this crash.

Ability of driver to remain calm and exercise defensive driving techniques made for a positive outcome of no damage or injury.

Awareness that ice could present itself during response made managing the drive to the emergency possible.

Total time of event was less than two seconds.