National Fire Fighter Near-Miss Reporting System
Reports Related to Lost or Trapped

Report Number: 05-0000067
Report Date: 05/27/2005 1410

Demographics
Department type: Paid Municipal
Job or rank: Deputy Chief
Department shift: Other
Age: 43 - 51
Years of fire service experience: 14 - 16
Region: FEMA Region IX
Service Area: Urban

Event Information
Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 06/04/2004 1904
Hours into the shift: 9 - 12
Event participation: Involved in the event
Weather at time of event:
Do you think this will happen again? Uncertain
What do you believe caused the event?

- Fatigue
- Situational Awareness
- Procedure

What do you believe is the loss potential?

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

Event Description
First alarm commercial building assignment response. COA: Light smoke showing ("C" side of building) from a one story commercial building (234,000 thousand square feet). The building is divided into three separate occupancies. The fire was located in suite "B" (50,209 square feet), Oriental Rug storage. First alarm resources make entry to the "A" side of the building through the office area. The initial crews encountered forcible entry delays (7 to 9) minutes. Once the entry doors through the office were open, engine company resources advance one 2 1/2 hose line 200' into the buidling. The fire is located in rack storage contained by the sprinkler system, but still burning and smoldering in many areas. The attack crews locate the fire and begin extinguishment efforts. During the extinguishment efforts the attack crews' low air warning devices begin to sound. The Captain orders the crews to back out of the building. As the crews make there way out of the building following their hose line, one fire fighter becomes separated off the hose line and now heads in the opposite direction. As the crews exit the building a head count identifies that one fire fighter did not come out. Emergency Traffic is requested and "fire fighter emergency" aka "May-Day" is announced. Rapid Intervention Crews are activated and make entry into the building to locate the missing fire fighter. Command is unable to contact the lost fire fighter via radio. The Rapid

Intervention Crew supervisor conducts a quick briefing (rapid information exchange) with the attack crew supervisor as to the last known location of the fire fighter. The Rapid Intervention Crews locate the missing fire fighter.

Lessons Learned

Company Unity of Command Span of Control Depth in & Distance too Thermal Imagers (over reliance)

Report Number: 05-0000658
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 do you believe caused the event?

- 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 FF'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 FF's 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 there ability.

Report Number: 07-0000736
Report Date: 02/20/2007 2136

Demographics
Department type: Volunteer
Job or rank: Captain
Department shift:
Age: 34 - 42
Years of fire service experience: 21 - 23
Region: FEMA Region I
Service Area:

Event Information
Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.
Event date and time: 07/16/2006 0100
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? Uncertain
What do you believe caused the event?

- Communication
- Situational Awareness
- Human Error
- Teamwork
- Training Issue

What do you believe is the loss potential?

- Life threatening injury

Event Description
We arrived on the scene to find fire on the third floor of the structure. I entered the structure as a member of the search crew with the attack crew following shortly behind us. The floor layout and placement of furniture hindered the attack crew in finding the seat of the fire. After completing our search we assisted the attack crew in locating the fire. Because of the fire load and a lack of rapid ventilation, conditions started to deteriorate and an evacuation was called. During the evacuation someone proceeded past me and started ventilating a window. I attempted to catch up with the FF but was unsuccessful in reaching him. I wanted to contact him to make sure he knew that an evacuation had been ordered. I decided to wait but my low air alarm started to sound. After a long wait, I decided to change my location to the top of the stairwell. When I attempted to move in the direction of the stairs, I realized I was lost. I became disorientated attempting to catch the firefighter that advanced ahead of the crew. I started skip breathing and called a mayday. Since we were operating on our dispatch frequency my mayday was walked over by a dispatching department. I attempted to find a window on an outside wall when I realized I was in a walk-in closet. I started thinking, “I can't believe I got myself into this.” I eventually found my exit after breaching a wall. I found the room that I started in at the top of the stairwell and made contact with the crew that was

looking for me. I was able to exit on breathing air but the firefighter that advanced during the evacuation exited the building without my knowledge.

Lessons Learned

Crew integrity is imperative and freelancing should never be tolerated. Evacuation procedures should be followed by everyone for their safety and their brother's safety. Dispatch frequencies should be separate from fire ground and interior operations. Ventilation should be coordinated with fire attack. When the unexpected happens make sure you know where you are, how you got there and remember how to get out.

Report Number: 07-0000773
Report Date: 03/06/2007 1420

Demographics
Department type: Combination, Mostly volunteer
Job or rank: Assistant Chief
Department shift: 24 hours on - 48 hours off
Age: 43 - 51
Years of fire service experience: 11 - 13
Region: FEMA Region V
Service Area: Rural

Event Information
Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.
Event date and time: 11/25/2006 0900
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 do you believe caused the event?

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

What do you believe is the loss potential?

- Minor injury
- Lost time injury
- Life threatening injury

Event Description
Our department was conducting a joint training between our rural department and a larger metro dept from our area. This training was being conducted at our live burn training center. Our training center consists of 4- 20' steel shipping containers on the ground floor with one 40' steel container placed across the top of the front 2 ground level containers making a second floor. We have both an interior steel stairway and an exterior wood stair to the second floor. After several reps of basic first floor fire attack evolutions all crews took a break before we began a simulated basement fire evolution. All doors were opened to allow dissipation of stored heat and smoke. Per our SOP/SOG's we placed a safety officer on both floors and began stoking both of our first floor burn rooms with pallets and straw. Both safety officers were in full PPE with SCBA with radios for communication. This drill is conducted by staging the 2 man crew at the top of the interior stairs on the second floor. When the first floor safety officer determines the conditions are appropriate the crew then descends the stairway and extinguishes the fire. The second floor safety officer monitors the conditions upstairs and assists with hose movement at the top of the stairs. My role that day was the second floor safety officer. After 3 reps, the smoke in the upstairs container had reduced visibility to

approx. 2-3" at the floor, I also began to notice very significant heat at mid level in the container. We had a crew in the "basement" at the time. As the heat conditions became intolerable I decided to vent the upper container by opening the upstairs window. After accomplishing that task I could begin to feel significant heat through my bunker gear and began crawling to the door. I failed to keep myself orientated to the container by keeping my hand on the wall. I believed that I was moving in a straight line to the exit, however I had become disoriented and before I realized it I fell down approx. 3-4 steps of the interior stairwell. I was able to stop my fall by extending both arms; however my helmet dislodged and fell forward with the chin strap catching my SCBA mask almost dislodging it. I found myself in basically in a chimney with extremely hot gases and smoke surrounding me. I was able to climb back up the steps and make it to the exit. Upon exit from the container I was able to stop the evolution with the crew still in the "basement" allowing the crew to exit without injury or danger. I still feel very fortunate that the only thing injured was my pride and feelings of invincibility. I believe the major contributing factors to this near miss were first and foremost my lack of awareness to the changing conditions and not following my training. By not keeping myself orientated I placed not only myself, but anyone else who would have had to rescue me in danger. I feel that I had allowed myself to become less than aware, after all, this was just training. After a post training critique it also became clear that both fires were allowed to exceed the temps set forth in our training SOP/SOG's resulting in a higher temp in the upper container than normal. We also discovered a design flaw in that we have nothing in place on the upper entrance of the stairwell to prevent accidental entry into that stairwell. Thank you for giving me the opportunity to submit my near miss. I hope that it can help prevent a similar incident in the future. It definitely was a wake up call to me.

Lessons Learned

First and foremost I learned to not ignore your training no matter how many times you've done it. It can be a fatal mistake to not pay attention. This incident has also made us re-evaluate our training SOP and retrain all our people to more closely monitor the safety conditions at our training center. We have also had to change the thinking that the hotter the fires the more training we get out of them. We have re-evaluated the design of our training center and are putting more exhaust vents into place and securing the upstairs entry into the stairwell with a door to prevent a similar episode in the future. My suggestions to prevent a similar event are: 1. Follow your training 2. Really look at and evaluate the design of your training facility 3. Ensure that everyone operating at your training facility is sure of the SOP's. 4. Require full PPE and SCBA when appropriate. 5. If the Chief does something stupid, tell him. [Crew Resource Management]

Report Number: 07-0000803
Report Date: 03/16/2007 0740

Demographics
Department type: Combination, Mostly volunteer
Job or rank: Lieutenant
Department shift: Respond from home
Age: 25 - 33
Years of fire service experience: 17 - 20
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: 03/12/2007 0230
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? Uncertain
What do you believe caused the event?

- Unknown

What do you believe is the loss potential?

- Lost time injury

Event Description
I responded in an engine with a firefighter to a dispatched structure fire. Additional reports from the first arriving units stated a doublewide home fully involved. As I approached the incident, I noticed a glow in the sky and flames from the roof area of the structure. After arriving on the scene, I donned my air pack and I met the Fire Chief at the front door. I asked him what he wanted me to do and I was given instructions to finish packing up (basically turn on my air) and go inside to fight the fire. My crew partner was a firefighter and we were instructed to conduct a left hand fire attack. We were told that another crew would be in shortly to go to the right side for fire attack (one member of this crew sustained an injury). We entered through side A side front door of the structure with a charged 1 ½" hose line. There was zero visibility as we entered the front door. I was not uncomfortable with the assignment nor to my knowledge was my partner. When we initially entered, I was the nozzle person but later gave the nozzle to my firefighter. As we entered the fire, the first room living room had been mostly extinguished by prior units. We found moderate fire conditions in the first room to our left (the bathroom) and continued to go further into the structure having to back up frequently due to fire overhead or behind us. Again, I didn't feel uncomfortable with the assignment and temperatures were not an issue. Our visibility was little to none but would improve with changing conditions. We continued down the hallway towards the south side of the structure and checked the bedroom on the southeast side of the house. I closed what was left of the door (it had been burned off to about the halfway point and this door was originally found open). After checking this bedroom, we extinguished the fire in the southwest bedroom however we did not enter this room. Fire attack was performed from the door into the

bedroom. We then backed down the hallway to begin fire attack in the kitchen area which was in the center of the house to the west. The sheetrock on the wall separating the kitchen from the living room had fallen out and the only thing left were the studs. As we entered the kitchen, I noticed fire to my right at the floor area and fire in what was left of the refrigerator. I asked the firefighter to extinguish the fire in the refrigerator and that's when he stated "We have a victim". I asked him if it was a civilian or a firefighter. This was about the same time I heard a PASS device go off. I knew we had a firefighter down. A Mayday-Firefighter down was verbally communicated to the Fire Chief. Two firefighters assigned as a Rapid Intervention Team were also sent in to assist the downed firefighter. I went over to the firefighter and found that he had fallen through the floor in the northeast corner of the kitchen just inside the wall separating the living room from the kitchen. The hole that had opened up was large enough for me to get into to assist the down firefighter. He stated he was trapped so I got into the hole with him in order to help free his feet that were trapped by floor joists and some duct work. While attempting to free his feet, I had asked for a hose line to extinguish some fire that was in the hole and around both me and the trapped firefighter. After freeing his feet and lifting his legs out of the hole, the other firefighters were able to assist him from the structure. While the firefighter was in the hole, he stated that his legs were burning up and that he was getting burned on his side. I got out of the hole without assistance and with my low air and other alarms going off. I immediately went to the front door and advised the Fire Chief that we had him out of the hole and he was being assisted to the front door by the remaining attack crews and members and RIT. I also advised him that the firefighter was burned and needed Advanced Life Support (ALS) to assist him. The trapped firefighter and all remaining crew members were out of the structure and ALS personnel began medical assessment to the injured firefighter. He was transported to a Level One Trauma Center and admitted to the Burn Unit. I checked myself for burns and injuries and did not have any. While in the hole with the firefighter, the thermal temperatures were uncomfortable and there was fire in the area where he was trapped. During the fire incident, we were working in little to no visibility with light to moderate heat and performing fire attack with a charged line from a standing position. Again, I was not comfortable with the assignment or detail. When the firefighter was found there was limited visibility which had cleared up enough that I could recognize who the firefighter was during his rescue. After the firefighter was removed from the structure and care began, I removed myself out of the fire attack and assisted with other roles at the fire scene. The firefighters PPE (turnout gear and air pack) were placed near the Chief's vehicle for later inspection and photographs. The State Fire Marshal Investigator was called to the scene and later an arson dog was brought to the scene for assistance in determining origin and cause. I talked with the Fire Chief shortly after the incident. We both agreed that our Emergency Services Director and Fire Chaplain should both report to the scene. The [State Name Deleted] Fire Marshal was also called. I stayed at the scene and talked with the investigators. I also assisted the investigators during their initial investigation of the home. I left the scene at approximately [Date and time deleted] in the Rehab and returned to quarters. After returning to my residence, I checked myself again and found no burns or injuries. The firefighter that was injured sustained 3rd degree burns to his left side just above the belt line and 1st degree burns on the inside of his right leg above the knee. The burn unit also stated he had a burn injury to his right hand. It was later discovered that another member removed the injured firefighter glove so he could activate his pass device. We believe that when the firefighter fell through the floor, his turnout coat rode up exposing unprotected parts of his body. This is what caused his 3rd degree burn. The firefighter received skin grafts the day after the incident. I believe adequate staffing was met for this call. We had multiple stations on the incident scene and rural water supply demands were adequate. There was

multiple 3000 gallon tankers involved in the water shuttle. Our county also has a Rehab vehicle and it was enroute to the scene when the injury occurred.

Lessons Learned

1. Ensure a proper size up of structure and assess life safety - Risk vs Benefits. 2. Ensure interior crews carry some type of hand tool. 3. Use the thermal imager camera to assist with size up. We had one on the incident scene but it was never removed from the case. 4. Assess structural integrity. It was 0230 hours with a rural volunteer fire department responding from home to a light weight construction doublewide with heavy fire involvement. 5. Have an SOP/SOG on what to do after a firefighter becomes injured on an emergency scene. Some actions to consider are: evacuation, medical response (if not already on the scene) and CISD after the incident

Report Number: 07-0000960
Report Date: 06/14/2007 1603

Demographics
Department type: Combination, Mostly volunteer
Job or rank: Fire Fighter
Department shift: 24 hours on - 48 hours off
Age: 34 - 42
Years of fire service experience:
Region: FEMA Region V
Service Area: Urban

Event Information
Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.
Event date and time: 12/16/2006 0000
Hours into the shift:
Event participation: Witnessed event but not directly involved in the event
Weather at time of event: Cloudy and Rain
Do you think this will happen again?
What do you believe caused the event?

- Weather
- Decision Making
- Communication
- Accountability
- Procedure

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description
Training began at approximately 0720 hours with a briefing conducted at the station in which all members participating were given an orientation in the classroom of the schedule, assignments and objectives for the training session. A diagram was produced on the dry erase board of the incident area sketch. Eight companies were assigned with inside safety crews and 3 stokers were used for prop setting and fire growth monitoring. All stokers were given instructions not to deviate from fuel load sets. Evacuation signal and PAR procedures were reviewed along with floor plan, MAYDAY radio call, all training objectives and safety line placement was discussed. At the training site, the lead instructor and inside safety crews completed a walk through of the site reviewing fire set locations and ventilation cutaways. All NFPA 1403 compliant devices were reviewed and identified (egress points, vent holes, etc.). All lines were laid out, PPE was checked, and roll call of all companies was taken prior to the first evolution. Three burns had taken place prior to the incident burn. Burn 4 began with the fire on the front porch in Division A. Fire was ignited by stokers and allowed to begin free burning. Fire set was 4 wood pallets, straw and a combustible finish of wood paneling was present to approximately 3' level around the inside of the room. During free burn, the

windows on Division A/B began to fail. The inside safety crew (Firefighters A & B) along with three stokers were located on the first floor of the fire building. Firefighter A & B proceeded to the 2nd floor to assume a safety position and assist in watching crews working on 2nd floor. The attack team mounted the attack approximately 8 minutes after fire ignition and had trouble with a kinked line, which slowed the attack. The stoker line was charged and positioned into the fire floor through Division C. The line was not staffed by firefighter A, firefighter B or any of the stokers. Conditions deteriorated rapidly both visibly and with heat build up. Fire began to lap out of windows on Division A extending to the soffits of the house. At approximately 1056, a radio report was heard that firefighters A & B were in trouble and a ladder was requested to the 2nd floor at Division D. At this time, 4 safety personnel, 3 stokers and a 4 person attack team were in the structure. A stand by RIT took Division A's back-up line and knocked the fire down on the main floor while other outside crews placed a second 16' ladder to the window were firefighter B was signaling for help. Dense black smoke was igniting and surrounded him. The ladder did not reach the sill of the window and instead was hooked with the ladders hooks to the sill creating an almost vertical placement. Firefighter B was able to bail out. Firefighter A came to the window with extreme deteriorating conditions of fire and superheated smoke over his head. Firefighter A escaped the 2nd floor in similar fashion as Firefighter B. During Firefighter A's escape, he lost contact with the ladder and fell to the ground striking a rescuer who broke Firefighter A's fall and both landed on the ground. A PAR check was initiated of all crews and all personnel were accounted for. Firefighter B suffered minor injuries from the bail. Firefighter A received burns over an undetermined percentage of his body. His burns included ears, neck, cheek, hand area and steam burns to his back and arms. Firefighter A refused treatment at the scene by paramedics but was later transported by his Fire Chief to a local emergency room for evaluation. Upon evaluation of the burns to Firefighter A, was transferred to a burn unit in a nearby major city. The firefighter who was attempting to rescue Firefighter A when he fell, suffered a minor neck injury and back pain that cause one day of lost time. Firefighter A remained in the burn unit for approximately 5 days and was off work for several weeks.

Lessons Learned

An independent investigation was launched into this incident as directed by the hosting department Chief. Investigators were used from nearby training academy and all had experience investigating training injury incidents. The independent investigation made the following recommendations. 1. All participants must were NFPA approved structure firefighter gear. The firefighter who received burns used an older rubberized set of gear and from burns and self admission, did not use a flash hood or the hood provided on the helmet. 2. All combustible interior wall finishing must be removed. One combustible panel was left in place and possibly increased fuel load. 3. Assure all paths of egress are maintained and protected. If training is taking place on upper floors, assure that proper size ladders are in place on all sides where egress may become necessary. 4. Ignition and interior safety teams should be limited to two personnel. Keeping safety teams interior from incipient stage through extinguishment should be carefully considered for each evolution. Every interior safety team shall have the protection of a hose line capable of delivering a minimum of 95 GPM. 5. Prior to the start of each evolution, recheck all components of the drill using a safety officer checklist. This includes but is not limited to radio checks, water supply, fire streams and hose lines match the required fire flow for the evolution. 6. Constantly monitor weather conditions and if necessary suspend the training until favorable weather conditions exist. This includes changing wind conditions. During this training evolution, the wind increased significantly during the 4th (incident) burn. 7. Follow all components of NFPA 1403 when

conducting live fire training. Continue to utilize the standards in the development of live fire training in the form of checklists and templates. Have a minimum of three separate people go through the checklist to make sure something was not missed and that all three agree that the 1403 topics have all been addressed. 8. Require all participants to sign an agreement that they will not refuse medical treatment and transport to the hospital if they are injured or possibly injured or directed by the host department and/or chief officer on the scene. 9. PPE must be NFPA approved and 3/4 boots and rubberized coats are not permitted. PPE must be worn in accordance with its designed use and inspected prior to each evolution by a safety person. This includes instructors, safety, stokers, and participants. 10. Guests participating in the training must have a signed permission slip from their Fire Chief granting permission to participate in the training. 11. Maintain a minimum of five hose lines; attack, back-up for attack, stoker line, safety line and an outside 21/2" line. 12. Designate radio frequencies and assign a designated person whose job is to do nothing but monitor working frequencies in a quite, secluded location where MAYDAY and emergency traffic can be immediately recognized. 13. Consider creating safe haven rooms where crews can go for protection in critical unplanned situations.

Report Number: 07-0001021
Report Date: 08/09/2007 1413

Demographics
Department type: Paid Municipal
Job or rank: Fire Fighter
Department shift: Other: 24 on, 24 off, 24 on, 120 off
Age: 25 - 33
Years of fire service experience: 14 - 16
Region: FEMA Region I
Service Area: Urban

Event Information
Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.
Event date and time: 04/02/1998 1330
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 do you believe caused the event?

- Situational Awareness
- Training Issue

What do you believe is the loss potential?

- Lost time injury
- Life threatening injury

Event Description
At the time Rapid Intervention Training (RIT) training was brand new to us. We were involved in various practical scenarios that led us to a bail-out drill with blacked out masks. I was with my buddy (a 20+ year lieutenant) descending a set of stairs while following a hose line. I reached the landing of the second floor and became disoriented making the mistake that I was on the first floor. I found the window that I knew to be there, opened it and bailed out. My partner heard me communicate to him that I was going out the window and before he could say anything (and being quite perplexed by my statement) I was falling approximately 12 feet to the ground below. I distinctly remember a moment of clarity just before I hit the ground and realized what I had done. I had clearly become disoriented and lost situational awareness of what floor I had been on. I had been in this burn building in the past but it was a new structure. Injuries included a fractured pelvis and a fractured right clavicle. A trip to a neurosurgeon ruled out any neck injury but it was touch and go there for a while. I had a complete recovery and was back to work in six weeks. Taking everything into account I was lucky it wasn't worse. Numerous things led to this incident. High on the list is the complete lack of oversight by the lead instructor and his cadre. There was no safety officer on the floor that I was on or one on the ground below to prevent such an incident.

Lessons Learned

The need for complete oversight on all aspects of hazardous training evolutions cannot be stressed enough. Although we were not in live fire conditions we were on upper floors of a building without adequate safety practices in place and had blacked out masks. A safety officer on each floor and on the outside of the building should have prevented this accident from happening. Also, safeguard could have been put on the windows to keep them from being used. I cannot stress how important it is to keep situational awareness and communicate well with your team. We had the communication all the way down the stairs but it failed shortly after that. Don't take anything for granted. People will do strange things when put in a stressful or perceived stressful situation.

Report Number: 08-0000078
Report Date: 02/08/2008 1702

Demographics
Department type: Paid Municipal
Job or rank: Safety Officer
Department shift: 24 hours on - 48 hours off
Age: 52 - 60
Years of fire service experience: 27 - 30
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: 08/01/2006 2059
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 do you believe caused the event?

- Command
- SOP / SOG
- Accountability
- Communication
- Human Error

What do you believe is the loss potential?

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

Event Description
1st alarm assignment (3-engines 1-truck 1-rescue and 2-battalion chiefs) dispatched to a report of smoke and fire coming from a magnesium/aluminum foundry. Due to a previous fire one year earlier and information known about the facility, the primary responding engine requested the foam unit be dispatched for additional Met-X extinguishers. On their arrival, that engine reported smoke showing and requested a 2nd alarm (3-engines 1-truck and 1 battalion chief). They reported to the 1st battalion chief who was just calling on scene and establishing command. The battalion chief requested the engine officer and firefighters with 1 Met-X extinguisher to get his TIC and enter an open door on the south side of the facility. Because the door was unlocked and large floor fans were running inside, the company officer thought maybe someone was inside, and the team immediately began a primary search using the TIC. Nothing was found but from some distance they spotted a very white hot fire 6-8' on the west and north 3/4 walls at the rear near 2 overhead doors. The company officer reported

their finding and knowing their air supply was getting low and the one extinguisher wouldn't control the fire, they exited the facility. At about this time (2115), I arrived on scene and was assigned the ISO position per command. As I walked down the south number 2 wall where the open door was, the battalion chief who was the safety officer had communicated with command his request to send the rescue company inside and have them open the rear overhead door nearest to the fire. Due to heavy smoke conditions and hazards/risks known from the previous fire, the rescue used a tag rope as a safety for entering the facility. The rescue operates in teams of two with the radio designation of Rescue A-Team and Rescue B-Team. The company officer and his partner were the A-Team with the TIC and began to make their way to the rear of the facility encountering many obstacles. As they came to the end of the rope, the officer could see the fire and the overhead door so he continued to the door and finding the lock was able to open it and yell for his partner to exit with him. Behind the A-Team was the B-Team who was coming to the end of the rope. They stopped and turned around to exit the way they entered. At this time, the company officer was not able to get the B-Team to communicate with him by radio so he did a face-to-face with the tactical battalion chief at the rear who advised Command to request the evacuation tone for possible lost firefighters. A rescue team of two firefighters entered the south door following the rope and at approximately 6' were met by the Rescue B-Team coming out. As the safety officer I immediately advised Command "I don't want anyone in the facility" and the evacuation tone was sounded again. The facility had many known hazards. By the nature of the work being done, we didn't have enough extinguishing agent and the fire was growing. We were not making any progress and it was time to take a defensive position. As I walked to the rear of the building to make sure everyone was out, I observed firefighters yelling at an engine crew inside the overhead door trying to extinguish the fire with a Met-X extinguisher to get out. This was happening just after the 2nd evacuation tone was sounded. That company was the last to get out and per the tactical battalion at the rear made one last shot with the extinguisher through an open window with fire blowing out. From approximately 30-35' I began a visual observation of the building and noticed the top corner of the ¾ wall cracked and opened up approximately ½ to ¾". I immediately yelled at the company near the wall to get out of there "something is going to happen". At the same time I noticed a change in the direction of the smoke and only had enough time to do a 180. Suddenly, a violent explosion occurred. This explosion blew all of us approximately 18-20 firefighters off our feet and to the ground, some covered with debris. I picked myself up and began to get away from the building fearing another explosion and looking for an ambulance due to blood running down my face. As I was walking to the front where I expected to find an ambulance, I heard the tactical battalion calling for more ambulances and help in the rear with firefighters down all over the place. I made it to the ambulance and was examined, bandaged, and transported to the hospital for a head laceration. Later at the hospital, I found out that everyone was all right and no other injuries had occurred. I ended up receiving 8-staples and approximately one month later had surgery for repair of a completely torn rotator cuff. After everyone was away from the building and accounted for, Command let the fire burn, evacuated a 1-2 block area around the fire, prepared for exposure protection, and considered the environmental concerns of air monitoring.

Lessons Learned

Preplan buildings in your communities and have SOP/SOG especially for high/risk high hazard buildings. Make sure Command has a manageable span of control of 5 as a general rule. We changed our operating procedure so the battalion chief responding on the 2nd alarm reports to Command and becomes his assist. Communications/accountability must be

maintained at all times. The firefighters thought to be lost at this incident thought they were closer to the door and in their hurry to exit, they didn't respond to calls from their company officer. This caused an evacuation tone to be sounded and many anxious moments for all on the scene. It is imperative that firefighters take the time to respond to radio calls. Never under estimate your enemy and be prepared for the unexpected. "If you don't know, don't go!" this can be a very difficult for us, the fire service to do. It's about our culture and many, many times we die because of it. Stay Vigilant. Stay Focused. Stay Safe. "EVERYONE GOES HOME"

Report Number: 08-0000090
Report Date: 02/16/2008 0141

Demographics
Department type: Combination, Mostly paid
Job or rank: Safety Officer
Department shift: 24 hours on - 48 hours off
Age: 43 - 51
Years of fire service experience: 30+
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: 01/04/2008 0730
Hours into the shift:
Event participation: Witnessed event but not directly involved in the event
Weather at time of event: Clear with Frozen Surfaces
Do you think this will happen again?
What do you believe caused the event?

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

What do you believe is the loss potential?

- Minor injury
- Lost time injury
- Life threatening injury

Event Description
I responded as the incident safety officer for a house fire in a single family detached dwelling. Temperatures were hovering around 15 degrees and there was frozen snow on the ground. Our response assignment consists of 5 engines, 2 ladder trucks, 1 heavy rescue, 1 EMS unit, 2 battalion chiefs and 1 safety officer for a structure fire. There was a report of a person trapped in the house. The shift commander (an assistant chief) also responded. First arriving crews reported a working basement fire and advised everyone was out of the house and accounted for. After reporting to command, I took a lap around the house and observed a small, 1950's vintage, split level with a large 2 story addition attached by a breezeway style kitchen off the C Side. Fire was showing from the D Side basement window in the original structure. Due to the unusual addition and extensive smoke conditions, locating the exterior access to the basement was somewhat hampered. Command ordered me to check on the crews operating in the basement since there were some garbled radio transmissions and little progress on controlling the fire. The IC was considering an evacuation of the structure. Once I located the exterior basement entrance (on the C Side of the original house, but hidden by a large deck between the house and the addition) I donned my SCBA and made my way down the outside

stairs. Once I entered, I crouched to stay below the smoke line, noting with my handlight that extensive damage had been done to the floor joists. Command called for an evacuation of the building just as I encountered the basement division commander (a BC) about 15 feet inside the basement door. He was agitated and ordering his crews out of the structure. When I asked him what the problem was, he told me there was a significant entanglement hazard from drooping wires and we needed to get out of the building. We accounted for all personnel and exited the building. Once outside, he stated he was walking through the smoke and had become enmeshed in the low hanging wires, becoming momentarily trapped and disoriented. The wires had wrapped around his facepiece and helmet. He stated the more he tried to disentangle himself, the tighter the wires wrapped around his head and neck. He didn't have a pair of cutters and the entangling was forcing him to stand upright. He could feel heat building up around him but was trapped in an upright position. He began calling for help. Another firefighter arrived with a pair of cutters and cut him out of the hazard. The BC also stated another officer had also been caught in the wires, tearing the trim off the brim of his helmet, but had managed to disentangle himself without incident.

Lessons Learned

Stay low in smoke filled atmospheres. Carry a pair of lineman's pliers in your pocket. Organize the tools and equipment in your pockets so you can find everything by touch. Set up one coat pocket for firefighting (e.g., firefighting gloves, lineman's pliers, multi-screwdriver, door chock and latch straps) and the other pocket for extrication/overhaul (e.g., work gloves, safety glasses, hearing proctection, seat belt cutter, etc.). Work in teams of at least 2 members. Carry a handlight with you at all times. If you get in trouble, sound a Mayday immediately. Speak clearly through your facepiece with your microphone pressed to the side of your facepiece, not on your regulator.