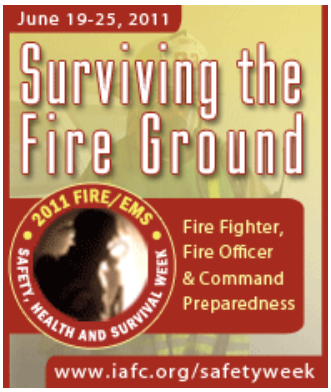

National Fire Fighter Near-Miss Reporting System
In Support of the 2011 Fire/EMS Safety, Health and Survival Week

Reports Related to Self Survival Procedures
Avoiding Panic, Mnemonic Learning Aid "GRAB-LIVES", Emergency Breathing

11-34

Event Description

Brackets [ ] denote reviewer de-identification.

At [time deleted] hours, units were dispatched to a structure fire. Engine [1] gave a report of a 2-story wood frame house with heavy smoke coming from the roof. Engine [2] reported on the scene and dropped a firefighter off at the hydrant and laid supply line into Engine [1]. Being the acting officer on Engine [2], fully dressed with all PPE and handheld radio, I proceeded to the front door of the structure to assist Engine [1]'s crew with pulling slack for the 1 ¾" pre-connect. Engine [1]'s crew had not located the fire and was searching for the origin of the fire.

I entered the structure and proceeded up the stairs with a firefighter from Engine [1]. Upon reaching the top of the stairs I asked Engine [1]'s firefighter to get me a pike pole so we could access the attic. There was zero visibility upon ascending the stairwell and there was no heat. I took 2, possibly 3, steps onto the second floor and unknowingly walked between two 2x4 studs of a framed unfinished wall. After a few minutes waiting on Engine [1]'s crewmember to return, I began to search for the stairwell to exit the 2nd floor. I knew I had taken a couple of steps so when I felt one of the studs of the wall, I moved back the way I thought I had stepped. When I moved I came to another stud. I immediately dropped to the floor to reach for the steps down but did not feel them. Being against what I thought was a wall I began to do a right handed search of the room thinking I would make my way around the room back to the stairwell. After making my way around the room, I ended up over the fire room. Engine [1]'s crew had located the fire and had begun extinguishment. There was a lot of heat in that area and I quickly moved away to an area (that I did not know at the time) which was right where I had stepped through the studs. I then called a MAYDAY over the radio, activated my PASS device, and waited on the RIT team. What I did not know was that the house was under restoration and the second floor was having a second room added to it. The studs that I walked between were approximately 22 inches apart. The smoke had traveled through the balloon construction walls and the floor of the second story was plywood that had large gaps at their seams.

Lessons Learned

Never be inside a structure by yourself. Always carry a tool inside and never consider a fire "routine". Always have your radio with you.

10-1014

Event Description
Brackets [] denote reviewer de-identification.
On [date deleted] Engine [1] responded to a residential structure fire. The dwelling was an approximately 8500 square feet, two-story dwelling with a full basement. Engine [1] was the second engine on the scene and Engine [2] had already established a water supply so Engine [1]'s crew was needed to make an interior attack. The fire was in the garage on the "B" side of the building and the entrance was made through the front door on the "A" side. Engine [1]'s driver was separated from his officer and firefighter due to an equipment malfunction and was reassigned to take the firefighter from Engine [2] into the structure. Engine [1]'s driver and the firefighter from Engine [2] made entrance with a 1 ¾" line through the "A" side and crawled towards the fire. When they were approximately 25 feet to the left of the entrance and, 15 to 20 seconds later, the smoke dropped and the heat elevated. At that time, the driver from Engine [1] told the Engine [2] firefighter to stay low. Then the whole house exploded and became fully involved. The driver from Engine [1] opened the straight bore tip into the ceiling to extinguish the fire and cool the room. The fire in the room was extinguished. Both crew members were ok and were going to proceed further when the ladder crew arrived to tell us to get out of the building because a Mayday and PAR had been called. Upon exiting the structure, it was discovered that both eight foot tall doors on the front had been blown out off the frames and all the windows in the structure were blown out. Four other firefighters who were about to make entry had been blown off the front porch as well. No injuries were sustained, but it did make everyone think about the ways of attacking very large residential structures.

Lessons Learned
Maintain crew integrity.
Maintain situational awareness
More training is needed on big residential structures.

10-277

Event Description
Fire department units responded to a reported residential fire [just after midnight]. Size up indicated heavy smoke showing with confirmation of the residents being out of the structure. The residents also reported that the fire appeared to be in the basement laundry area, around the dryer. Entry was made into the structure simultaneously with some ventilation underway. Further ventilation operations were ordered following reports from inside.

The basement stairway was located next to the main floor kitchen, with the seat of the fire located directly below the kitchen in the basement. The incident progressed as expected through the first twenty-minute PAR. Water supply was established, utilities

were ordered for disconnect, RIT team was established, and ventilation was well underway.

About thirty minutes into the incident, a request was made from interior crews to have someone bring another 1 ¾" line in through the garage to access the basement. The RIT team was assigned to perform this task and then stopped, as the garage was too packed full of stuff to even make their way inside. That crew was then outside the structure, but had not reassembled for RIT assignment (IC's call).

The IC was making another 360 to check on a utility worker when dispatch notified IC of the forty-minute operational mark. During this PAR, command heard a PASS device activate and yelled in the direction of the activation, thinking that someone might have been standing still and it activate. The PPV fan was still operating so the noise level was elevated. Soon after hearing the PASS device, dispatch also reported the radio emergency alarm activation of a radio. IC was on Side "A" looking in the open front door of the structure and could see the faint blinking of the PASS strobe in the direction of the sounding PASS device.

Immediately, one of the personnel originally assigned to RIT was told face- to-face to get that person out of the building. At the time, IC was extremely unhappy, thinking that somebody had just let their PASS device activate and didn't bother to stop it. The RIT member followed the hose line in a short distance, approximately thirty feet, toward the strobe and dragged the downed firefighter out. Upon exiting the structure, he was helped to his feet, immediately assessed for injury, and then relocated to the ambulance for further evaluation. Subsequently, he was transported to the hospital, as a precaution, for further testing.

In interviewing the [downed firefighter], he stated that he was with his crew member in the basement on fire attack, along with another two-person crew. His low-air alarm had activated and he continued to work, thinking he had plenty of time. After a time, he told his partner that he was going to run outside and get another bottle. He then left his partner and headed out of the laundry area in the basement, following the hoseline around the corner and up the stairs. Part way up the stairs, he completely ran out of air. In a condition of "high motivation," he started to hurry. Staying low and following the hoseline, he became disoriented and ended up reversing his direction. He then fell back down the stairs, knocking his face piece off.

The conditions were still untenable. He repositioned his face piece so his Nomex hood would give him some filtering action. He then activated his PASS device and activated the emergency button on his radio. He stated that he was unable to speak due to the heavy smoke conditions.

As a side note, his partner thought he heard a PASS device activate, but he stopped hearing it (the captain went back up the stairs to attempt exit) so he assumed that it was an accidental activation. As the captain cleared the top of the stairs, he had to keep his

face close to the floor. It was at this point that the RIT person located him and pulled him to the exit.

Lessons Learned

One important lesson learned that must be addressed is that the SCBA Lost and Disoriented Firefighter Training conducted by this department worked in its most basic form. When the situation became less than ideal, the captain controlled his emotions, remained calm, activated his PASS device and his radio emergency button, took steps to get the best quality air he could find, and was actively involved in rescuing himself. Remembering those important training points is very commendable. However, although the outcome of this "near miss" incident was positive, this particular incident itself was completely preventable.

Several opportunities for improvement have been identified in response to this incident:

1) Strict adherence to the "Two-In Two-Out" rule should be enforced.

2) Strict adherence to the department's air-management protocol (when the low air alarm activates, you call for relief and then immediately exit with your assigned partner or crew) should be required. Additionally this should be reinforced with a department SOP/SOG regarding SCBA Operational Procedures and Air Management.

3) A "ZERO TOLERANCE" departmental policy regarding PASS device activations should be implemented and enforced. When a device activates, it gets immediate attention. Anything less than this creates a potential environment of dangerous complacency when hearing them activate.

4) Incident Command should diligently track at any moment where their personnel are and maintain a good communication link with anyone on the fire ground.

5) Once a RIT team is assigned, they should not be reassigned unless activated or relieved by a replacement, until the incident de-escalates.

6) Regular training should be conducted on the Lost and Disoriented Firefighter Procedures, along with SCBA Air Management training.

7) Training should be regularly given to reinforce the importance of the SOP/SOG's that are in place to keep personnel safe on the fire ground.

10-64

Event Description
We were dispatched to a residential fire in the middle of the night. We arrived and were met by a neighbor who was house-sitting. They stated that they heard an alarm 2 hours prior to our call but did not act on it. We arrived to a fully involved residence, 2-story and basement. The officer did a 360 without issuing orders to firefighters. Another firefighter and I advanced a 1-¾" pre-connect to the front door. We forced entry and began to fight the fire. The other firefighter left to find the stairs. I advanced the line about 15' inside the door. I noticed a hole in the floor at that time, and attempted to advance between the hole and a baby grand piano.

Once I was between the piano and the hole, the floor gave way and I was dumped into the basement which was fully involved. I hugged the attack line, which slowed my fall, and I reached the basement uninjured. My radio fell out of my pocket, so I was unable to call for help. My partner was off looking for the stairs, so no one knew I was in the basement. I fought back the fire with my line, activated my PASS alarm, and shined my light up through the hole. I also began yelling for help. The firefighters on the second line saw my line in the hole and heard me yelling. They attempted to pull me up but were unable to. An attic ladder was placed in the hole and I left the structure.

Lessons Learned
Stay together as a team.
Make sure your radio is secure.
Maintain situational awareness (burn time, structure stability).

09-1101

Event Description
I was sent by command to fight an attic fire in a large rectangular apartment building. Access was made to the attic by punching a hole and placing a ladder into the hole. I remained at the foot of the ladder to keep it secure while a fellow firefighter was at the top with a 1 ¾" attack line with very little pressure. The fire and smoke continued to bellow forcing him to come down the ladder. While descending, the air tube connected to his regulator got hung on the top of the ladder. As a result, he slipped ripping the mask sideways from his face and exposing his mouth and nose. He immediately turned his hood over his face to protect his respiratory system but ended up inhaling smoke.

Lessons Learned
Be mindful or your surroundings and your gear. If you lose your mask from blunt force or an accidental pull, you should find something as quickly as possible to protect your airway.

09-400

Event Description
Engine [1] responded to a residential automatic alarm. Upon arrival, the engine company found a three story wood-frame structure with nothing showing from the street. The crew exited the engine, made their way to the structure, and prepared to enter through the open garage door.

Once inside the crew found no smoke or other indications of fire. Investigating for the cause of the alarm as they advanced, the crew did not encounter any smoke or fire. At the third floor, the crew found smoke exiting from under a closed bedroom door. The officer opened the door to find fire and heavy smoke.

One of the crew members quickly realized that he forgot to place his regulator into his mask. With the hallway quickly filling with smoke, the member struggled to make the connection. He was unable to make the connection and began to panic. He turned and left the crew without telling the other members. He made his way outside to fresh air. He was able to connect his regulator and returned to the crew inside.

Lessons Learned
Do not become complacent with nothing showing calls.
Be familiar with your equipment.
Understand your situation.
Teamwork and accountability are extremely important.

09-114

Event Description
On the evening in question, we received a report of lighting striking a residence. Upon arrival, the first due truck advised there was heavy smoke coming from a two story residential structure. I was one of 4 officers on the scene and made my way interior. I was the lieutenant interior and took over command. I had several personnel inside, but did not then realize that there were multiple agencies on the scene. The other two departments were all volunteer departments. As I made my way upstairs, I found several of the volunteer personnel inside without airpacks. I quickly sent them out. I found myself and our assistant chief on the second floor fighting the fire in the attic with no support. I called out to command to find out where our personnel were. He advised they were changing out bottles.

We had a second due truck on the scene, but they were involved in establishing a water supply. I quickly relayed this information to the chief and we continued our efforts. It was at about this time the nozzle started malfunctioning and my air pack ran out of air without my low pressure alarm working to notify me. I started out of the structure as per SOP in limited visibility. I quickly found the hose line and started to exit when I heard a

voice stating that his pack was running out. I turned around to locate the voice and found a volunteer still inside with us. At that moment, the ceiling fell and I lost the hose line.

I was completely out of air at this point and called out to the chief to let him know. I unhooked and placed my hose into my jacket and began to find the exit, when we heard the panicked voice of the exterior command stating the stair well was burned out and the fire was advancing up into the second floor. The fire lit off the second floor room where we were and the panic set in. The chief was nearly out of air along with the volunteer and I. We had all but given up when we found a window and escaped the structure. We were then trapped on the roof. Ground crews quickly set up a ladder so we could escape with only minor smoke inhalation injuries.

Lessons Learned

1) Need for multi-department training.
2) Unified command system.
3) Personal accountability system.
4) Training in these types of situations.

07-907

Event Description

I was responding on the first arriving engine to a confirmed structure fire. The crew I was with was very quick at deploying a line, flaking it out correctly, advancing to the fire floor, and proceeding with the fire attack. The first truck on the scene had conducted their initial, but the homeowners were already out and safe. The second truck crew stretched a second line off our engine and had advanced to the adjacent room to aid in fire attack; however, this was unusual for a truck crew. Once they were in place, our crew had vibe alerts starting to go off, so our officer ordered us out to rehab. Our departments SOPs call for no firefighter to remain in a structure for duration of longer than two bottles of air. We went outside to the rehab area got our bottles changed by members in the staging area while we were on our knees so we could quickly return to line to replace the truck crew. So far, all was well. My bottle was changed and I was not too familiar with the person who was changing my bottle and his level of experience or even his name. After my bottle was changed, I did what stupidly I had never done before, I checked my gauge on my harness and it was only a little over 1000 lbs, just enough to not set the vibe alert off yet, but sure enough, after one breath the vibe alert went off. I hate to think what might have happened if I hadn't checked and had just returned to work. I would have been totally useless and my crew would have had to back out with me again. The truck crew would not have had a chance to significantly rehab before they went back in, among other things.

Lessons Learned
Always, always, always, check your own gauges. Nobody values your safety more than you do and this could help save your fellow firefighters as well. Also, my department is creating an SOP so that all empty bottles will be stored in a color coded rack so it is easy to distinguish between full and empty bottles. Also, I feel that as firefighters we all suffer from an indestructibility complex and do not admit to certain faults of our bodies, such as eyesight (have you ever seen a firefighter squint to read the gauge on a bottle?) But it is also funny/ridiculous that the most important piece of information on the bottle (the gauge) is also the smallest, it's easier to read the company's logo that made the pack. This should be changed.

07-736

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.

05-478

Event Description
Out of air emergency on operating apartment fire, (address deleted)
Engine (number deleted) arrived and sized up a multi-story, fire resistive apartment building with smoke and fire from an upper window, would be setting up a water supply and establishing an attack. Engineer and I, Squad (number deleted), noted moderate smoke pushing from a 3rd floor window, Charlie side. Our objective would be search and rescue on the fire floor. I dressed, including SCBA and forcible entry tool, and made the stairwell 2nd landing before masking up. My Engineer and Engine (number deleted) were entering behind me. The smoke on the 3rd floor was thick from floor to ceiling, so I told Engine Lieutenant I was going right in the hallway, thinking to locate people in trouble or possibly the fire.

After making a quick circuit to the right and finding or hearing no one, I met up my Engineer, the Engine Lieutenant and his crew, stretching line up the stairwell. I said I was moving left down the hall. Doors on the right were closed; no one acknowledged shouts for assistance, and came upon an open door to the apartment fire. I entered, found approximately ¼ of the room contents burning. Returned to the entry door, indicated to the Engine Lieutenant the location of the fire, its size, and asked if he had water. He replied, "Not yet." I re-entered and searched the apartment, found no one, and began cleaning out the living room window, including the sash. I then began throwing burning debris out of the window; a bicycle, stacks of papers, magazines, files, and plastic bags of stuff. FF (name deleted) arrived and asked if I would be able to throw it all out. My hands were getting hot. A desk, books, and shelving to my right lit up, and I said I didn't think so. I asked, "You got water?" He replied, "Not yet."

My heads up display at this time was flashing yellow. I told (name deleted) I was going after a can. He said OK. Visibility in the hallway was zero. I mentioned to the crew with (name deleted) I was going out to get a can to slow the fire. I counted the strides and doors to the stairwell, about 10 and 4, came off air in the stairwell, and proceeded to get the can from Engine (number deleted). Making the 2nd floor landing for the second time, it was smokier and more crowded with firefighters, so I excused myself through them to get back to the burning apartment, and found it hotter with visibility zero. I asked the Engine Lieutenant if he had water. He replied, "Not yet?" I told him I had the can and would try and check the fire. He said, "Do what you can." I moved into the fire apartment, noticed my heads up display flashing red and vibrating, and dropped down. I began dispensing cold (water) onto the fire, noticing an immediate banking down of heat and smoke to an uncomfortable level.

A few moments passed and I felt the last breath come through my air line. I put the can down behind and to my right, turned and crawled to where I thought the exit was, back and to my left, and found myself in a small space; definitely not the exit. I had now exhausted the air in my tank and face piece, and was using a dive technique of rapid breathing to redistribute the air in my lungs. I back crawled a few feet, moved left thinking the line was in the room and thus a way out, but found nothing as the line was

pulled back with the crew in the hall. I stopped, dropped my face to the floor, cracked the chin of my mask, took a shallow breath, and said, “I’m out of air.” The air at floor level was very hot tasted oily, and made me dizzy. I also began to realize panic. To my right I heard, “OK, this way.” I got to my feet, struggled to the door, and stumbled into the hallway, recalling the way out from before. I was moving rapidly, feeling the panic of no breath, zero visibility, and so many people to run into. At one point a firefighter grabbed me, holding on, and saying, “Wait!” but my mind had to get out now and was focused blindly on the stairwell. He had the ability to think of buddy breathing. However, my brain did not. I fell headlong into the stairwell and other firefighters, got my mask pulled away, finally drawing in some breathable air. I was dizzy and weak, lungs burning, but happy to hear Chief (name deleted) ask me what was wrong. I told him slowly I was out of air. They got me to my feet and moved me down and out to a lower landing where I briefly talked with an arriving Ladder Captain about no water and a can in the room. He said OK. The Chief's Aide escorted me to the lobby and out to the medical sector where I was treated for smoke inhalation. The initial findings were ashen color, elevated heart rate, and blood pressure, wheezing respirations without signs of singed nasal passage or throat residue. An albuterol treatment was given on scene that cleared up the wheezing. A 14gauge line was begun en route to (name deleted) Hospital. The ER found an elevated CO level that laid me off for two days. I was released for duty prior to the following shift.

Lessons Learned

1. Less than optimal accountability with partner. I knew my Engineer was behind me, searching, or assisting with extinguishment, but actual contact was not maintained.

2. Individual search of lengthy hallway not necessarily fire department policy. High life hazard, lack of immediate manpower for the search area, and experience level of personnel persuaded me the undertaking. Voice contact was maintained.

3. Disregard of mask information and warning devices led to out of air emergency. Solution of less self sufficiency and delegate uncompleted task to equipped personnel.

4. Exit should be initiated before running out of air, but importantly, if your mask is vibrating and distance precludes immediate evacuation, buddy breathing should be arranged before being completely out of air. Successful buddy breathing is near impossible when one person is unable to breath.

5. Personnel should discover for themselves the length of time they can breathe from a bottle of air in varying conditions, and practice evolutions of problem solving.

6. Take a can during early operations to assist in rescue or containment.

Review Questions

1. **What does "GRAB-LIVES" stand for?**

G-_____	**L-**_____
R-_____	**I-**_____
A-_____	**V-**_____
B-_____	**E-**_____
	S-_____

2. **Panic is a condition that leads to an increase in the following:**

   a. _____

   b. _____

   c. _____

3. **List 3 ways to verbally communicate where you are should you have fallen through a floor or become lost in a structure.**

   a. _____

   b. _____

   c. _____

4. **When performing the "R" of "GRAB-LIVES", one should follow the acronym "LUNAR". What does this other acronym stand for?**

   L-_____
   U-_____
   N-_____
   A-_____
   R-_____