National Fire Fighter Near-Miss Reporting System
Reports Related to NFPA 1403-Compliant
Live Burn Training in Acquired Structures

11-11

Event Description
Brackets [ ] denote reviewer de-identification.

On Sunday [date deleted], the Training Division of the [name deleted] Department of Fire-Rescue Services held a live fire training exercise. Firefighters were just finishing up our fourth burn,and were looking at the previous fire re-progression, when the floor collapsed as they were standing in the room. Five firefighters fell into a four foot crawl space, suffering minor injuries. Our RIT team that was in place as per NFPA 1403 initiated rescues and assisted all five firefighters in self-extrication. All were ambulatory and walked to the EMS staging area where they were treated and transported for minor injuries. They were then treated and released from a local hospital. There were a total of 47 firefighters from seven fire departments, on scene.

Lessons Learned
The building in question was inspected by the Code Enforcement Office and building inspectors. The entire exercise was based on NFPA 1403. The Office of the Chief is working with local authorities and the state, to determine this unforeseen structural problem.

10-100

Event Description
On the evening of [date and time deleted], our department, as part of a training exercise, was going to burn down an older two story home located in the countryside, outside of town. As part of NFPA 1403 "live training burns" regulations, we performed a thorough walk through of the residence and, in doing so, we located approximately 80 lbs of dynamite located in two wooden cases stored in the basement of this old abandoned residence. Speaking with the home owner it was learned that the residence belonged to his grandparents and he had no idea that the dynamite was in the basement. Upon our discovery, I contacted the [law enforcement] who attended and secured the scene immediately and made arrangements with their bomb disposal team to remove the explosives.

Lessons Learned
By doing this walk through we prevented a disaster!!!

10-127

Event Description
We had a shift training fire at a 75' x 100' wood frame commercial building. Several fires were set during the day inside the structure and NFPA 1403 was somewhat followed. The first fire after lunch was in the rear of the building with ventilation on the roof in the front. Wind conditions changed in a matter of 30 minutes of setting the fire. I did not realize the change in weather conditions. Another officer and I were caught inside the building and had to bail out of a window on the south side of the building. Conditions deteriorated rapidly and the hoseline failed. There were flashover conditions at the floor level on a fifteen foot ceiling that collapsed. The training officers in the rear were caught by the dropping lights and ceiling tiles.

Lessons Learned
We had lack of water supply to overcome the BTU's that were being generated by the fire. Minimal staffing, lack of training and communications were factors. Departments need to have a better understanding of the wind and weather, as it relates to firefighting.

10-335

Event Description
While conducting live fire training in a non-gas fired live fire training facility, we encountered a situation when a "mayday" should have been called. Adherence to NFPA 1403 was critical and instructors, safety officer(s), ignition officer and IC were appropriately assigned. During one of the later evolutions, a student suffered a medical emergency and became separated from his crew on the second floor of a three-story facility. Upon doing so, the student failed to call a "mayday" which, by not doing this could have resulted in exhausting his air supply. In addition, the student's crew and assigned instructor never realized he had been separated until exiting the structure. A personnel accountability report was requested and the missing student was identified. When doing a rapid search of the facility, the student was found and removed from the second floor. The student was then handed over to EMS and not allowed to participate in live fire training the remainder of the day.

Lessons Learned
Even though NFPA 1403 was being followed, it proved to not be infallible.
The assigned instructor and crew displayed poor situational awareness.
Rehabilitation efforts have to be more focused and not overlooked. The student had become severely dehydrated and lapsed into unconsciousness while in the live burn training facility.
Hydration and adequate rest between evolutions cannot be understated.

10-432

Event Description
I was in command during live fire training. Two fire instructors from my department and one from a neighboring department were directing interior operations. The evolution was to light a small fire on the second floor and have a hose crew enter, search, and extinguish. I was unaware that the instructors had locked all the doors and windows to the house while they were inside. This could have prevented a rapid access or egress by companies and instructors if needed. Thankfully, no injuries occurred and crews eventually made it in to extinguish the fire.

Lessons Learned
Have a written plan prior to incident training. Follow NFPA 1403.

10-459

Event Description
There was live fire training being conducted with an acquired structure where hidden ammonium nitrate was buried under the floor. Without this knowledge, the building was checked as per policy, but nothing was found. During the initial fire set, the building exploded. Fortunately, no one was inside at the time resulting in no injuries of department members but civilian injuries did occur.

Lessons Learned
We re-evaluated training procedures. We no longer would burn acquired structures.

10-1183

Event Description
While training in an acquired structure, we started two rooms on fire at the same time in opposite ends of the structure. One of the fires was adjacent to the means of egress for the crew at the other end of the structure. A safety line was pulled into the residence to knock down the fire so the other crew could exit the building.

Lessons Learned
Follow NFPA 1403 and do not deviate from it. Take instructor classes that have to do with acquired structures.

10-62

Event Description
Brackets [ ] denote reviewer de-identification.
We were part of live fire training in an acquired house that was a 2-story, 3 bedroom, balloon-frame farm house. This was the third and fourth fire of the day. Fire was on the first floor bedroom with attack and back-up lines inside the structure. I was acting inside safety officer and part of the scenario was to have one of the firefighters from the back-up line pulled off the line, taken into the bedroom and call a MAYDAY. A RIT team was set up as part of the training. After the fire was marked "under control", the mayday was given. A dummy was already placed in the room to be used when the RIT arrived. We had other department personnel assisting due to NFPA live burn regulations. The RIT team was 2 firefighters from another department. I did not know their level of training as I should have.

The RIT crew entered the room, found the dummy and contacted command. They packaged the dummy, applied air via a mask and prepared to exit the structure. Firefighter [a] grabbed the head and firefighter [b] grabbed the feet. The dummy was lying partially in a closet and partially in the room. The bedroom had one closet that spanned the length of the room with multiple folding door entries into the closet. Firefighter [a] grabbed the head, seemed to become anxious, did a 180 degree turn, and took the dummy and firefighter [b] back into the closet. Firefighter [b] continued to tell firefighter [a] that they were going the wrong way but firefighter [a] seemed to get more and more anxious and would not listen.

I let this continue about 1-2 minutes before I stepped in to talk with both FFs. This is when I was informed by firefighter [a] that he was almost out of air in his SCBA and needed to get out. I informed both FFs to drop the dummy and exit the building. Firefighter [a] was so turned around that I had to grab him and lead him out. Luckily he did not run out of air and there were no injuries.

Lessons Learned
With this being the last fire of the day, I thought everyone was on the same page. I did not repeat the possibilities of what might happen during the training fire. I later found out that the RIT team did not refill the SCBAs because the fire prior to this, RIT was not used. We were all complacent.

10-996

Event Description
We were training at an acquired structure, conducting a live burn. We had many successful burn evolutions. There were firefighters there from multiple departments and with a wide range of experience levels. The weather was good for the first part of the day, but changed very quickly as the wind picked up and started coming from the

opposite direction. We lost windows from the fire breaking them out. The strong wind pushed the fire back on us and the smoke immediately obstructed all visibility. As the instructor, I ordered everyone out. The students left the line and made their way out. Due to the zero visibility, I did not see them leave the nozzle. I picked it up and continued to flow water as I left the building. The accountability officer at the door helped pull the line out and everyone was accounted for.

Lessons Learned

Stop the training and check your plans and operations with major weather changes.
Have enough staff to keep track of safety and planning functions.
Keep new and less trained personnel at the basic level until their skills are adequate to move up to more advanced skills.

10-1048

Event Description

While participating in a drill at an acquired structure, a three person crew was directed to advance a line to the second floor. The building was a small single story residential structure with a small attic/second floor which was accessed via a drop-down stairs. For the drill, the building had been filled with smoke which limited visibility.

The crew advanced the line through the front door and located the drop-down steps. The lead firefighter advanced the line up the stairs as the backup and the third firefighter pulled hose into the building. Once the firefighter on the nozzle got off the stairs, the backup firefighter climbed to the top and advanced the line into the attic. While feeding the line upward, the backup firefighters later reported they felt the stairs shift slightly. They attempted to climb the last couple steps to the second floor when the stairs collapsed. The firefighters dove forward and were able to land partially on the second floor and pull themselves onto the second floor. A ladder was brought into the house to replace the failed stairs. It was later determined that the top of the drop-down stairs had pulled free from the attachment to the building.

Lessons Learned

At the start of the drill, the condition of the drop-down stairs had been discussed and it was determined that they appeared sound and should be fine for the drill. While the structure of the stairs may have been adequate, their attachment to the building was not.

While no injury occurred, it certainly was possible for the outcome to have been different if the firefighters on the stairs had not reacted as they did or if someone had been under the stairs at the time of the collapse. This illustrates why firefighters should not trust ladders or non-standard stairs that are present at a scene. If in doubt, use your own equipment.

09-128

Event Description
I arrived for my 12 hour day shift and learned that we had a live fire/smoke training set-up for the day. The department had acquired a large warehouse/office building that was going to be torn down and the department had set-up multiple days of drills to include search & rescue, SCBA and hose line drills.

Numerous evolutions had taken place in the morning utilizing a barrel with class "A" material that was set on fire to produce smoke. As the day wore on, the drills were ending and the fire chief decided to do a “respond-in” type drill. This required the barrel to be lit and crews would arrive to the building from around the block simulating pulling up on an actual building fire.

As this was set up, I was placed onto a 3rd or 4th due apparatus that had been heavily utilized during the previous drills and had very limited equipment and SCBA's left on it. Upon my arrival, it was obvious that the building was starting to get involved in the fire much further and much more rapidly than anticipated. Heavy fire was starting to consume the warehouse and/or office areas and crews were being assigned to fire suppression.

Mutual aid companies from surrounding departments were called. As they arrived, my crew and I were able to obtain an older model SCBA. My crew (consisting of four) took a 2-1/2' hoseline into one of the man-way doors that lead into the warehouse portion of the building. We did this in an attempt to knock down the bulk of the fire. We didn't get more than about 8'-10' when we started to hear a loud rumbling sound and shortly after that a large crashing noise. We quickly realized that the flat roof (that was supported by steel trusses with gravel on top) was collapsing. We started grabbing each other in order to retreat out of the building and luckily, no one was injured.

Lessons Learned
The lack of teams in readiness coupled with inadequate equipment at the ready played a major role in the potential for life loss. Not fully adhering to NFPA 1410, contributed greatly to the incredibly rapid fire spread, subsequent loss of the building, and loss of further training opportunities.

09-677

Event Description
This incident occurred during a training fire involving a two and a half story residential structure with a slate roof. We did not remove the slate roof off of the building before burning. We started a fire on the second floor of the structure. As the fire breached the walls and extended into the attic space, it burned the roof trusses. The weight of the

slate caused the roof to collapse into the attic space. The roof did not collapse further, but there could have been a major collapse of the structure.

Lessons Learned
Identify all hazards of the training building.
Evaluate and follow up other people's work, especially when it comes to safety.
Develop better SOP regarding acquired structures and follow NFPA 1403 Standard.
Evaluate training sites thoroughly and continuously.
Communicate on the training ground to all personnel.
Stress the importance of maintaining situational awareness.

09-919

Event Description
After completing four live burn evolutions in an acquired structure, a PPV fan was placed near the basement doors to vent the structure. All the evolutions were basement fires and were compliant with the requirements of NFPA 1403.

After ventilating for about 15 minutes, myself and a crew of two went into the structure to retrieve the metal drum and remove the 1-3/4 hose that was the safety line for the ignition team. We had full structural gear without SCBA.

Once we entered the basement, we found the drum still burning and impinging onto the ceiling joists. Extinguishment was quickly made with the handline and we found no extension.

Lessons Learned
Decision-making and situational awareness are of utmost importance. The decision to remove the hose team without fully extinguishing the class A barrel could have led to an actual uncontrolled fire in the basement.

The safety officer and the instructor assigned to the basement both left without verifying extinguishment.

Lesson learned – make sure the fire is out before leaving.
