National Fire Fighter Near-Miss Reporting System
Reports Related to Dryer Fires

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07-1013

Event Description

We arrived as the first in engine company to a single story residence fire with heavy (black-dark grey) smoke showing from the A & B sides. This home had no garage. The IC had arrived and established command. His 360 of the structure showed no signs of a basement.

The homeowners arrived as we were pulling a 1 3/4 attack line to the front door at the A-D corner, advising no one was in the home. I was the nozzleman; my back up man had a recently acquired a thermal imaging camera. Visibility was poor, one foot at best. The back up man gave directions to the fire with the use of the camera. We made our way down the hallway encountering and pushing back rollover to a bedroom in the B-C corner. We found the bedroom fully involved with fire. The fire was knocked down within 30 seconds with no visible fire remaining. The back up man and I noticed our knees were extremely hot as we remained in the hallway. The back up man advised me that the camera was "whited out" and he thought we had fire underneath us. We then noticed that the bedroom was once again becoming suddenly well involved with fire. I made the decision to make a second attempt at knocking the fire down. We darkened the fire down again and decided to vacate the building once our low air alarms began going off. The second arriving engine company met us at the front door, taking our place on the attack line. We told them what was developing and that we believed there may be fire underneath the floor. They cautiously advanced only to find that the hallway floor had fallen into a full basement, not a minute after we had exited. The fire had originated as a dryer fire in the basement and had extended into the bedroom above.

Lessons Learned

Look for signs of a basement beyond the obvious, i.e., behind shrubs, and asking the occupant if there is a basement. Trust your instincts. Hot knees should tell you something. Don't get tunnel vision on what is in front of you and lose thought on what is probably underneath you. Aggressive is good but I think we were too aggressive on this fire, not taking the time to evaluate the big picture; especially knowing there was no life hazard. A door was found at the C-D corner that led to the basement where the fire was extinguished. Handlines could have been placed into windows to suppress fire on the first floor until the one in the basement was knocked down.

07-1024

Event Description

Upon arrival at a reported dryer fire, a small fire was visible from beneath the dryer. The initial size up seemed to be a small lint fire under the dryer. The fire was extinguished using a water extinguisher. After extinguishment an attempt was made to remove the damaged dryer from the residence as part of overhaul. When the dryer was moved an electrical arc was visible from the rear of the dryer. Overhaul operations were

stopped and a request for power to be cut was made. After power was cut and the dryer removed from the residence it was discovered that the cause of the fire had been an electrical short and not overheated lint. Though the electrical cord had been melted and had arced at least twice, the circuit breaker never activated. There was a period of time where the dryer could have become energized during extinguishment and overhaul.

Lessons Learned

Future fires involving electrical appliances should result in an immediate termination of electrical power to a residence until the cause of the fire is determined or the appliance can be unplugged from the household power.

08-103

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

Lessons learned: Eye protection and SCBA should be worn during overhaul situations. Due to the fact that the overhaul was hot and flames were showing, they should have been wearing SCBA.

Suggestions to prevent similar events: Command needs to assign a safety officer and reduce free-lancing through staging officer.

Actions to correct the situation: Review of training standards, proper use of PPE, respect for volunteer fire fighters suggestions and other departments in a mutual aid situation.

10-227

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.

10-329

Event Description

Note: Brackets denote reviewer de-identification.

Close Call [address omitted]
[Incident number omitted]
Two Story Structure Fire [date omitted]
[Shift omitted]
An assistant chief, a Lieutenant and two firefighters were forced to call a mayday after becoming disoriented on second floor of residential structure fire.
SUMMARY
On [date omitted] at [time omitted] hours, [department name omitted] Fire Rescue was dispatched to a dryer on fire inside a house. The initial response was three engines, one ladder truck, one ALS rescue, one squad (heavy rescue), one paramedic lieutenant and a district chief. At [time omitted] hours, Chief Unit [1] reported to dispatch and responding units a large column of smoke in the area. Chief Unit [1] gives initial size up as 1 ½ story residential structure with large volume of fire with explosions. Chief unit [1] located closest water supply and ordered dispatch to activate the working fire file and, at [time omitted] hours, assumed “command”. The working fire file dispatched an additional engine, truck, ALS fire rescue, [company name omitted] ambulance and power company and notifies via pager a fire inspector and administrative chiefs. A water supply was established and two 1 ¾ “attack lines were deployed. E [1] positioned one line on the Alpha side and E [2] positioned the second line on the Bravo side. Command assigned the third due engine E [3] as rapid intervention team (RIT). E [2]

was cautioned by command to be aware E [1] was making their way in on the alpha side. Command ordered first due truck (T [1]) to team up with Squad [1] for primary search and reported the possibility of an elderly female inside. S [1] located the stairs to the second floor on the delta side and reported to command "heavy fire".
Command requested E [2] to position their hose line to protect S [1] search crew. E [2] was on the opposite side of the structure. E [2] attempted to locate S [1] via radio and received no response. Command then attempted to establish E [1] s position as interior. Chief Unit [2] radioed command that he had repositioned E [1] to the delta side to back up S [1]. E [4] radioed it had established a secondary water supply. Command ordered second due truck (T [2]) to assist T [1] (outside team) with vent enter search (VES) second floor.
Command ordered E [4] to tag up with E [3] for (RIT) (now six personnel) because crews are working on two floors. Chief Unit [3] radioed to command he has S [1] and E [1] operating on the second floor. T [1] radioed command they were exiting the second floor. Command attempts to confirm an all clear of victims and receives no response due to radio traffic between Chief Unit [3] and Chief Unit [2]. Chief Unit [3] reported to Chief Unit [2] they are pulling the ceiling and have fire over their heads. Chief Unit [2] responded back to Chief Unit [3], "That back part of the house is getting ready to light off, got to get a line in there." Interior crew requested ventilation of the second floor windows. T [2] radioed to command that there were way too many people on the second floor. T [2] asked command for confirmation that primary search is complete and second floor is all clear. Command confirmed all clear and reassigned T [2] to first floor for overhaul. At the twenty minute notification from dispatch, command assigned Chief Unit [4] as safety. T [2] radioed to Chief Unit [3] to determine the number of companies on the second floor. Part of Chief unit [3]'s response to T [2]'s question is inaudible, but stated due to lathe and plaster walls and ceilings, they were having trouble getting through. T [2] notified Chief Unit [3] that he and his crew were coming back to the second floor to assist. S [1] Lieutenant radioed to command that he was exiting structure, was low on air and had a missing member. Chief Unit [3] radioed command he had S [1]'s missing member with him. T [1] radioed command they needed a hose line to the delta side. Command asked Chief Unit [2] to take care T [1]'s request. No response from Chief Unit [2]. Twenty two minutes after arrival, command asked all units to stand by for a personnel accountability report (PAR). Command radioed to Chief Unit [2] that no one was in the house per the home owner. Chief Unit [2] responded to command," OK, let's rethink how we're doing this then." Chief Unit [3] radioed a request to command for a status report on smoke conditions from the outside. Command acknowledged. At [time omitted] hours, command requested dispatch for the emergency retreat tone and that all crews exit the structure for a defensive attack. A second (PAR) was initiated by Command. At [time omitted] the second (PAR) was completed. At [time omitted] hours, Chief Unit [2] radioed command, "We're going to send T [2] with Chief Unit [3] back up to the second floor and I'm going to have E [4], who's on the rear, to keep that bottom room in check with all that junk in it, that's where most of the smoke is now second floor, copy?" Command wanted confirmation of what crews and what floor interior and also confirmed E [4] at rear entrance on Charlie side. Chief Unit [2] confirmed Chief Unit [3] and T [2] on second floor and E [4]'s position. Command radioed to Chief Unit [2] he had a report from an investigator there were

oxygen bottles inside the structure so there may be a few that have not exploded yet. Chief Unit [2] responded, "I copy that." Chief Unit [2] radioed to Chief Unit [3] for a situation report. Chief Unit [3] responded they are looking for the base of the fire. Chief Unit [2] notified Chief Unit [3] he had" balloon frame smoke" showing from the second floor. Chief Unit [3] requested a progress report from command on smoke conditions from the outside. Command had Chief Unit [2] respond from his vantage point. Chief Unit [2] responded to Chief Unit [3] that he was unsure of the type of construction he had on the second floor, smoke was coming out of everywhere as usual and that was taking care of the first floor, too. Dispatch gave forty minute notification. Command ordered Chief Unit [3] off the second floor because he didn't feel comfortable with interior operations, "We'll do this from the exterior." Chief Unit [2] ordered T [2] to protect Chief Unit [3]'s retreat from the second floor. Command requested Chief Unit [2] to the street for a face to face. Chief Unit [2] responded he will meet up after crews are out safe and he agreed with commands change of plan. Command reaffirmed he did not want anybody inside the building anymore. Chief Unit [2] radioed to Chief Unit [3] with urgency, "I need you out of there right now, (Chief Unit [3]) now." Chief Unit [3] responded "OK, we're coming." Chief Unit [2] to Chief Unit [3], "I need you outside right now." T [2] attempted a radio transmission, but was cut off. T [2] with urgency, radioed command, "Can you get somebody up here we're lost." Safety (Chief Unit [4]) radioed command he's sending T [1] in on the delta side," to get (Chief Unit [3]) out of there." T [2] transmitted a mayday to command. Chief Unit [4] (safety) responded "T [2], go ahead with your mayday." T [2] advised he and his crew are on the second floor and they couldn't find their way out. (An audible low air alarm could be heard through T [2]'s radio transmission). Chief Unit [4] advised T [2] crew to go to the delta side windows; T [1]'s crew was coming to get them. T [2] advised Chief Unit [4] that he can't find his way. Chief Unit [4] responded "Alright, they're coming in to get you." Command requested a second alarm through dispatch. Chief Unit [4] radioed to Chief Unit [3] to try to make it to the delta side; T [1] was coming to get them. Chief Unit [3]'s response was inaudible. S [1]'s two person crew returned to the delta side after changing out air cylinders. Due to the fact [1]'s crew performed the primary search of the second floor, they were familiar with the floor plan. S [1]'s lieutenant and firefighter entered the delta side. There was heavy fire involvement of the open interior stair area. When S [1]'s lieutenant reached the second floor hallway, he located the first member involved in the mayday. S [1]'s lieutenant was able to guide each of the four members involved in the mayday to his firefighter on the stairs. S [1]'s firefighter then guided the members out the delta side door to safety. During the rescue T [2] radioed to command with extreme urgency, (first part of transmission was inaudible), believed he had a missing member and, "I need another line to the delta side, now!" Command ordered E [2] to the delta side upstairs to assist T [2]. T [2] canceled the mayday, all personnel was accounted for. Command asked for confirmation on T [2] crew and Chief Unit [3]. T [2] confirmed all personnel out safe. Command ordered all personnel out to the street ASAP. Command reaffirmed again that this is a defensive attack and nobody was to be inside, had dispatch activate the emergency retreat tone and then called for a (PAR). When (PAR} was completed, command again stated defensive attack only.

Lessons Learned

Recommendation #1: Fire departments must utilize the basic principals involved in applying the risk versus benefit analysis. No risk to the safety of firefighters shall be acceptable when there is no possibility to save lives or property.

Recommendation #2: Fire departments should ensure that adequate numbers of staff are available to immediately respond to emergency incidents. See N.F.P.A. 1710 requirements attachment included in this report. *

Recommendation # 3: Fire departments should ensure that incident command is properly established, transferred and maintained

Recommendation #4: Ensure all fire ground operations are initiated through command to maintain strict accountability of operating company's locations and tasks performing.

Recommendation # 5: Fire departments should ensure that staffed back-up hose lines are utilized to protect the means of egress for the primary attack and search crews, especially in multi-story open stairwell structures.

Recommendation # 6: When companies are operating a hose line on the floor above the fire in a two story structure with an open stairwell, a protection hose line at the base of the stairwell must be in place.

Recommendation #7: Fire departments should ensure that a Rapid Intervention Crew is established and remain intact and ready to respond to firefighters in emergency situations.

Recommendation #8: Fire department must have a thorough knowledge of building construction. In balloon frame structure, fire has unimpeded access to the entire structure through non-fire stopped walls and floor joists. Fire will move quickly up to the top of the structure and into the attic. For this reason it is critical to get the attic/roof opened up. Fire moving up or down through exterior stud channels can often best be stopped by removing siding from the outside at the second floor line.

Recommendation #9: Fire departments should implement joint training on response protocols with mutual aid departments.

Recommendation #10 Ensure that S.O.P.s are developed, trained on and strictly adhered to on Mayday protocols. A separate radio channel during a mayday should be used.

Recommendation #11 Ensure that officers and firefighters review the uniqueness of balloon frame construction. The most effective ways of attacking fire in hidden void spaces, ventilation practices, structural integrity and the effects of wind. Thermal imaging cameras on the exterior siding may assist in locating hidden fire.

Recommendation #12: The National Fire Protection Association (NFPA) should consider developing more comprehensive training requirements for fire behavior to be required in NFPA 1001 Standard for Fire Fighter Professional Qualifications and NFPA 1021 Standard for Fire Officer Professional Qualifications and states, municipalities and authorities having jurisdiction should ensure that fire fighters within their district are trained to these requirements.

10-472

Event Description

Our crew had been at the main station for training for several hours. Temperatures were below freezing but our engineer did not feel the need to leave the truck running outside. We received a dispatch for smoke in the basement of a residential home. Upon arrival, light smoke was coming from the basement door which exited to the outside. While our engineer was getting ready, my partner and I took an uncharged 1 and 3/4 inch line into the basement. Within a minute or two, we found out that the fire was actually coming from a clothes dryer that was actively burning under the stairs that we had just come down. We made several calls for water but never received it. Once we realized that the stairs were now burning (as well as our uncharged hoseline) we backed out. It was only five or ten minutes before the second due engine got us water, but by that time the staircase was gone. It was the only egress from the basement. We would later find out that ice had formed and prevented the pump from working on our engine.

Lessons Learned

The lesson learned here was never, ever go into a basement without a charged hoseline. I knew this before but since I experienced it for myself, I will never repeat it. Secondly, do not leave your pump wet if the temperatures are below freezing unless you plan on leaving it running.