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Report of the Week

Knowing When to Say When...

05/19/2011

Report Number: 10-0000797

Report Date: 06/05/2010 10:29

Synopsis

FF receives burns during training fire.

Demographics

Department type: Volunteer

Job or rank: Lieutenant

Department shift: Other

Age: 25 - 33

Years of fire service experience: 11 - 13

Region: FEMA Region II

Service Area: Suburban

Event Information

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

Event date and time: 08/05/2007 11:00

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear and Dry

Do you think this will happen again?

What were the contributing factors?

- Decision Making
- Human Error
- Situational Awareness

What do you believe is the loss potential?

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

Event Description

Upon arrival to the training ground, I entered the structure with a 1 3/4" handline. We made our way to the rear of the trailer. The trailer contains three stationary props and a rollover simulator. The room in the rear contained two props and the rollover simulator. The room was fully involved. I made an attempt to force entry to the steel door. Due to the heat, the door had expanded. I was finally able to gain entry. I immediately applied water to the props and fire.

The props did not extinguish as they were designed. I went from a kneeling position to lying on my side due to the heat inside the trailer. I felt the side of

Aren't propane cylinders usually white?

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my face and left arm burning. I immediately turned around to the other crew members and advised them that it was too hot and we needed to exit. The safety (whom was also in trailer) immediately began yelling for everyone to exit.

Upon my exit from the structure, it was determined that my SCBA face piece was cracked, the left sleeve of my jacket was discolored and the striping was melted. My helmet was melted and the flashlight attached was non-existent. My Nomex hood had discoloration to the left side as well. I also received minor thermal burns to my left ear, cheek and arm. The unit was also designed to automatically shut down at 500 degrees at the floor. Following this event, the unit was tested and they were unable to duplicate the problem. The props and sensors functioned as designed.

Lessons Learned

You need to be aware of your surroundings and limitations. There is a need to pay closer attention to the signs that are present. I was determined to force the door and extinguish the fire. In hind sight, I overlooked the signs and could have limited the exposure.

Report of the Week

Today's structural PPE ensemble allows us to enter hostile environments like never before. The gear is designed to withstand temperatures far in excess of what the unprotected human systems can withstand. This capability, however, is somewhat of a double edged sword. We may be able to function in non-survivable environments due to the protection, but when the protection breaks down our exposure to injury accelerates. The structural firefighting ensemble was devised to provide firefighters with protection to fight fires, and a last line of defense should a fire flashover. As the reporter in [10-797](#) notes, there were warning signs prior to entry that should have given him pause.

"...The room was fully involved. I made an attempt to force entry to the steel door. Due to the heat, the door had expanded. I was finally able to gain entry. I immediately applied water to the props and fire.

The props did not extinguish as they were designed. I went from a kneeling position to lying on my side due to the heat inside the trailer. I felt the side of my face and left arm burning. I immediately turned around to the other crew members and advised them that it was too hot and we needed to exit. The safety officer (whom was also in trailer) immediately began yelling for everyone to exit..."

Many of us have participated in training burns at training facilities where doors and windows have been warped from repeated heat exposure. As the reporter cites in [10-797](#), the high heat that had expanded the door should have been a clue that the situation was indeed intense and the failure of the prop to react to the application of water should have been a warning to leave the room. Once you have read the entire account of [10-797](#), and the related reports, consider the following:

1. If your department uses a live burn prop fed by gas (propane or natural), how often is the prop calibrated and checked for proper operation?

2. The door in the report is described as a "steel" door. At what temperature would a steel door swell in its frame to prevent opening?
3. The reporter states that the crew started the attack on their knees, but was quickly driven to the floor by the heat. At approximately what temperature would the inside of the trailer been to force the crew to the floor?
4. The SCBA facepiece the reporter was wearing cracked while the reporter was inside the prop. What is the failure temperature of the SCBA facepiece you use, and why is this important to know?
5. This near miss takes place at a training facility. List five positions that should be staffed to properly conduct a live burn at a gas prop fed burn.

Fixation is the term used to describe the attention level that prevents other relative information from getting to our brain. The task level firefighter can become fixated very quickly on their assignment. Officers can become fixated as well as they fulfill tactical assignments. Knowing that fixation prevents information flow, which is critical for all firefighters to be aware of. Officers in particular need to be cognizant of information not being received due to their own fixation. Good decisions are based on processing and reacting to the information. It is critical to interpret the signs and signals a fire transmits in order to have a more informed, organized and safe operation.

Related Reports – Topical Relation: Heat Exposure

[05-214](#)

[06-441](#)

[07-1059](#)

[08-562](#)

[09-980](#)

[10-1257](#)

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Note: The questions posed by the reviewers are designed to generate discussion and thought in the name of promoting firefighter safety. They are not intended to pass judgment on the actions and performance of individuals in the reports.