



[www.firefighternearmiss.com](http://www.firefighternearmiss.com)

## Report of the Week

Lost in the structure; heavy smoke.

12/17/09

**Report Number:** 09-0000990

Report Date: 11/14/2009 10:32

### Synopsis

Crews caught in roll-over, communications blamed.

### Demographics

Department type: Paid Municipal

Job or rank: Battalion Chief / District Chief

Department shift: 24 hours on - 48 hours off

Age: 43 - 51

Years of fire service experience: 21 - 23

Region: FEMA Region VI

Service Area: Urban

### Event Information

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 11/09/2009 03:30

Hours into the shift: 21 - 24

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event: Clear and Dry

Do you think this will happen again? Yes

What were the contributing factors?

- Communication
- Situational Awareness
- Decision Making

What do you believe is the loss potential?

- Life threatening injury

### Event Description

Our department was dispatched to a structure fire reported by police who were initially dispatched to a burglar alarm. First companies arrived to find a two story, wood frame multi-use structure with moderate smoke issuing from the structure. After forcing entry, the engine company (three person hose team) entered with an inch and three-quarter attack line and a TIC. The crew reported high heat conditions and indicated that the TIC screen was red! They proceeded to the right and pushed to the rear of the structure with heavy black smoke but no visible fire. A rescue company (2 person team) entered shortly after the engine company. They too reported extreme heat at the floor and a Red screen on the TIC. The rescue crew also proceeded to the right and pushed to the rear.

Outside, the IC and ladder company crew observed smoke conditions rapidly changing from laminar light brown smoke to a turbulent black smoke pushing from the entry doorway. At this time, IC attempted to contact the initial engine company without success.

Back inside, the rescue crew reached the engine company at the rear wall. They all reported the same high heat conditions with no visible fire. Some confusion occurred when personnel mingled together and at some point, the rescue crew lost contact with each other. The engine captain also lost track of one of his two rookie firefighters. One of the rescue members retreated outside and reported he had lost his partner. At the same time, the engine captain attempted to radio IC that he too had lost a member of his crew and to report the condition encountered inside.

Back outside, the IC ordered the ladder company to "vent" a large window on the A Side of the structure. As this window was vented, the ladder crew observed fire at the floor level and it rolled across the room toward the rear of the structure.

The captain of the engine observed the fire roll over head and ordered his crew to evacuate. He reported extreme heat and made a hasty exit out of a window. Upon exiting, he reported that he had lost his crew and a MAYDAY was called. Almost immediately, all interior crews were accounted for at the entry doorway. The engine captain sustained 2nd degree burns to his face. No other injuries were reported. Crews quickly regrouped.

Later arriving companies were assigned to the fire attack, and the fire was quickly contained.

### **Lessons Learned**

Communications: The interior crews had some difficulty with the radios inside. The radio seemed to work fine. User errors lead to the problem. Better training in the use of the radio will correct this issue.

Situational awareness: All personnel on the interior crews failed to recognize the conditions they were entering. While it was during the early morning hours, better education and understanding of fire conditions and behavior would prevent this error in the future. During a critique, the involved personnel recognized the conditions and agreed they should have made some tactical priority changes prior to entering.

Decision making: The decision to vent the window once the conditions were recognized was a risky one at best. This action most certainly prevented a flashover that could have resulted in a catastrophic event for the interior crews. However, this decision placed the interior crews in extreme danger. The decision to vent should have been communicated to the interior crews so they could be prepared for the change in the environment.

All involved personnel did an extraordinary job and reacted to the changing conditions accordingly. The mayday was called immediately in accordance with department policy and a RIT team was in place and prepared when the MAYDAY occurred. Our department has recently increased training in situational awareness, communications, and size up. This training did aid in recognizing the changing conditions but additional training will occur.

### **Discussion Questions**

Emphasis on rapidly changing fire conditions and the science behind why conditions change in an instant are gaining more prominence. Watching for changing conditions and remaining alert for the signs while reacting in sufficient time to prevent injury or death are critical functions for today's fire officer. Once you have read the entire report and the related reports below, answer the following:

1. Do you believe "rapidly changing fire conditions" deserves the attention it is receiving?
2. Who serves as the "lookout" to monitor fire conditions on your fireground?
3. Can one person be expected to manage all aspects of fire command and control?
4. What actions can you take in low to zero visibility atmosphere to get a look at smoke conditions? (Hint: involves a handlight held close to your facepiece).
5. How easy can you operate your radio in low visibility, high heat atmospheres?

### **Related Reports**

05-420

06-177

07-959

08-074

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.