



National Fire Fighter Near-Miss Reporting System

Report #	Synopsis	Page #
11-241	A routine medical call quickly turns into a Haz-Mat incident.	2
11-223	Routine EMS call becomes life threatening.	4

Report Number: 11-0000241
Report Date: 06/28/2011 01:12

Synopsis

A routine medical call quickly turns into a Haz-Mat incident.

Demographics

Department type: Paid Municipal
Job or rank: Captain
Department shift: 24 hours on - 48 hours off
Age: 34 - 42
Years of fire service experience: 24 - 26
Region: FEMA Region IX
Service Area: Urban

Event Information

Event type: Other
Event date and time: 05/31/2011 22:00
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?

What do you believe is the loss potential?

Event Description

At 2106 hours our engine company was dispatched to the XXX [de-identified by reviewer] restaurant for a fall injury. The engine company found the patient, who was a restaurant employee, at the top of a stairwell that leads to the basement storage area. Crew members began the regular line of questioning and treatment for what seemed to be a standard medical call. The patient was a 24 year old female, who was pregnant. The patient stated that she was going into the basement to check on something and became lightheaded and fell. One of the other employees heard the fall and went to the stairwell to help the patient. Both employees exited the stairwell and called 911 to report the "fall injury". As the captain from the engine was questioning the patient and one firefighter was checking vitals, the other firefighter and the engineer went into the basement to see if the patient had tripped or slipped on something. Shortly after entering the basement both crew members became lightheaded and exited the basement. The crew had no information from anyone that would even give us the slightest thought that something else might be wrong. Upon exiting the basement, the engineer fell and both members reported dizziness and a bitter taste in their mouths. The captain immediately called for a hazardous materials assignment and evacuated everyone out of the building. The Haz-Mat team made and entry into the building in bunker gear and S.C.B.A. The goal of the entry was to meter the basement for what was suspected to be a carbon dioxide leak.

The manager of the restaurant told the crews that they had just had the carbon dioxide tank filled a couple of hours prior to the call. The crews made entry with 2 combustible gas indicating meters and 2 flammability detection meters. As the crews descended the basement stairwell they started to get decreased oxygen readings and slightly increased volatile organic compounds readings on the combustible gas indicating meters. As the crews continued into the basement the oxygen readings continued to decrease (the lowest reading was 17.5%). One of the many interesting things about this call was the readings the crews were getting on the flammability detection meters, which was reading 100% LEL. When switched to 'percentage of gas' the readings dropped to 25%. The readings were obtained at both ground level and at ceiling level. These reading prompted Haz-Mat Sector to exit the building and start to mitigate the potential hazards. Due to the elevated LEL readings, the Haz-Mat team shut off the natural gas at the meter and attempted to shut down the power from the exterior. It has since been determined that the over-saturation of carbon dioxide caused the flammability detection meter to 'false-positive'. Note: • This call quickly changed from a routine medical call to a life threatening Haz-Mat call. • The entire first six minutes of EMS call were conducted at top of the stairs with no indication of any hazard. • Patient was crying hysterically the entire time and would/could not communicate with crew or give any information. • Little info was given to the crew from the restaurant employees who continued to work normally until hazard was identified. • Patient may have been scared to get in trouble with boss if she thought she did something wrong.

Lessons Learned

Lessons Learned: This restaurant chain has recently started using large CO₂ tanks to provide propellant to the fountain beverages and the tanks are not regulated by any code. Do not rely on signage as we found no warning signs, placards, or identifying signs indicating that bulk compressed gas was on site. The bulk CO₂ is typically stored in the basement and if there is a leak it will displace any ambient oxygen causing a dangerous atmosphere. We could not find any CO₂ alarm system in place or functioning. Non Haz-Mat crews are routinely dispatched to "check odor" calls. Should they all be Haz-Mat?

Report Number: 11-0000223
Report Date: 06/06/2011 23:40

Synopsis

Routine EMS call becomes life threatening.

Demographics

Department type: Paid Municipal
Job or rank: Captain
Department shift: 24 hours on - 48 hours off
Age: 34 - 42
Years of fire service experience: 7 - 10
Region: FEMA Region IX
Service Area: Urban

Event Information

Event type: Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc
Event date and time: 05/31/2011 21:00
Hours into the shift:
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?

What were the contributing factors?

- Decision Making
- Situational Awareness
- Human Error

What do you believe is the loss potential?

- Minor injury
- Life threatening injury

Event Description

A paramedic engine company was dispatched to a report of a pregnant female feeling ill. Upon arrival, the patient was found at the top of a set of stairs inside a restaurant. She reported that she suddenly felt ill after starting into the basement and did not think she could make it out. The patient was treated and two firefighters walked down the stairs to investigate. After a couple of minutes, both felt heaviness in the chest, started to lose peripheral vision, and exited. At the top of the stairs it was obvious to other firefighters outside that they were in distress. The building was evacuated and the call was upgraded to a hazardous assignment. It was later found that there was a crack in one of the carbon dioxide lines feeding the soda machines. Hazmat found the oxygen level in the basement to be 17%. One patient and two crew members were transported, and the crew was evaluated and released for the remainder of the shift.

Lessons Learned

Don't become complacent. Always maintain situational awareness. Below grade, anything has the potential to become a hazard. Make proper (safe) decisions. Be smart. Do not let your guard down. Utilize Special Ops teams if there is any chance a hazard exists.