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Report of the Week

"80,000 gallons later, we entered the structure?"

09/15/2011

Report Number: 07-0001036

Report Date: 08/29/2007 17:37

Synopsis

Firefighter sustains injury after structural collapse

Demographics

Department type: Paid Municipal

Job or rank: Fire Fighter

Department shift: 24 hours on - 48 hours off

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: FEMA Region V

Service Area: Urban

Event Information

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

Event date and time: 08/28/2007 01:26

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
- Task Allocation
- Command
- Communication
- Individual Action

What do you believe is the loss potential?

- Life threatening injury
- Lost time injury

Event Description

My crew was first due to a 2 alarm structure fire with an arson fire in a vacant structure that spread to two exposures (one on each side of the vacant house). After two hours of deck gun operations on a building that also involved two ladder trucks pouring water into the structure, a Chief with the consent of another chief and my engine company officer (who volunteered us) ordered my crew into the building with a handline to "do a quick recon and put out any hot

80,000 gallons later, we entered the structure?"

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spots upstairs that the monitors didn't get." The ladder nozzles and deck gun were shut down and we went inside with a handline. The other three crew members made it into the staircase. While I was in the middle of the room, the attic floor and beams collapsed onto the second floor crashing down to the first floor where I was standing. The time between us entering the building and the time of the collapse was no longer than 90 seconds. I was knocked to the floor and was trapped under the debris. I suffered a head injury and a torn patellar tendon. The contents of the upstairs ended up in the first floor room and I could have been killed. By my judgment, approximately 80,000 gallons of water was pumped into that structure and we were ordered in anyway. This was after a previous call to evacuate 45 minutes earlier. This should not have happened! Now I am off work with a career threatening injury and the structure involved was demolished along with the vacant one.

Lessons Learned

Never follow the orders of an officer who doesn't have your safety first in his mind! My officer [deleted] believes that when an order is given the only option is to follow it. He nearly got me killed. If the rest of the crew had been in the middle of the room with me and not at the stairs, we all would be dead right now. Never put the human risk element into a fire operation when there is no risk of life or property. Why were we sent into a building already so severely damaged that it was going to be torn down after two hours of heavy water flow into the upper levels? I cannot describe how angry I am today.

Report of the Week

The vacant structure fire poses a number of dilemmas to the command officer. The fire causes range from unintentional to repeated arsons, leaving the life safety question ambiguous. The buildings are often in states of disrepair that makes them unstable to enter before the application of fire streams. As this week's featured report, [07-1036](#) notes, the vacant structure can be a major threat to the other surrounding structures. All of the factors added together create decision points that challenge common attack strategies.

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The mindset to enter a structure and extinguish fire becomes a primal function in a firefighter's psyche. It takes the vigilant firefighter (from probationary graduate to command level officer) to recognize that entry into any structure, particularly the vacant structure, requires an evaluation of the risk versus reward. Once you have read the entire account of [07-1036](#), and the related reports, consider the following:

1. Who calculates the fire flow into vacant structures at your fire scenes?
2. Given the scenario in [07-1036](#), what actions could be taken to address "hot spots"?
3. A deck gun flowing 1000gpm for two hours pours how much water into the structure?
4. Converting gallons to pounds: How much does the total amount of water applied by the deck gun in Question #4 weigh?
5. What is the typical load bearing capacity for a two-story, wood frame, residential structure in your jurisdiction? How does this capacity compare to the load applied by the water weight in Question #4?

The vacant structure fire is among the highest fire hazard incidents a department faces. A strong SOP, disciplined fire crews and clear minded commanders are the formula for reducing the hazard.

Related Reports – Topical Relation: Vacant Structures

[05-618](#)

[06-231](#)

[07-1152](#)

[08-125](#)

[09-085](#)

[10-169](#)

Have you experienced a near miss during operations at a vacant structure? Submit your report today to www.firefighternearmiss.com so everyone goes home tomorrow.

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.