



NOTES from Brian Alkire

Working as a 3 1/2 year fire fighter with the Sheffield Township Volunteer Fire Department, I responded with two other fire fighters in one of our department's tanker trucks to a reported structure fire in a mutual aid department response area. Prior to our arrival, the first department arrived on scene and started firefighting activities. An interior attack was initiated by fire fighters on an approximately 4,000 square foot house with attached garage. Upon our arrival with the tanker, the intense fire was forcing fire crews out of the house. At that time, fire crews were transitioning to a defensive mode. Another fire fighter and I pulled a 2.5" hoseline to the rear of the residence and began to flow water at the point of where the house and garage met. Approximately 5-7 minutes after flowing water, the hoseline went dead. We made several communication attempts with the pump operation to no avail. I told the other fire fighter to stay put and went to see what the problem was with the water supply. While walking to the pump, I observed a small amount of fire venting out the southwest eve of the garage area. This being the furthest point from the fire in the residence, I realized there was fire concealed in the attic area of the garage.

Continuing past the overhead garage doors, I noticed movement in the garage area. This movement was six fire fighters trying to salvage an antique truck out of the garage area. The truck was on concrete blocks to take the weight off the tires. The fire fighters were using a jack and cribbing to raise the truck off the blocks. Four fire fighters were at the front of the truck closest to the outside, one fire fighter was in the middle of the garage retrieving cribbing, and one fire fighter was at the rear of the garage also retrieving cribbing. Upon seeing these fire fighters in the garage area, I entered the garage to warn them of the fire over their heads. Conditions in the garage area were no heat, no smoke, and no fire showing. These fire fighters did not know there was fire over their heads. Upon entering the garage, I went to the fire fighter who was in the rear of the garage first, passing the other five fire fighters. Within seconds of making contact with this fire fighter, I heard a pop and the next thing I remember is standing up in a complete pile of debris that was on fire.

I looked to where the other fire fighter was last at and he was no longer there, so I began to extricate myself from the building. When I stood up, I took one breath of air and held that air until I was out of the structure. None of the fire fighters in the garage, including myself, wore SCBA. Once outside the structure the fire fighters knocked me to the ground and started to pat out the fire on my bunker gear. Prior to and at the time of the collapse there was no water on the fire scene. After the fire fighters patted the fire out, I heard someone say get into the Portatank. The Portatank had water in it, so I jumped in. Medics on the scene removed the turnout gear and packaged me for transport. I was alert and conscious until I arrived at the hospital approximately 10 minutes after the collapse, when doctors sedated me. I was not wearing the chin-strap on my helmet, and lost my helmet during the collapse. My gear was approximately 1yr. PBI in good to excellent condition. Gloves had never been worn prior to this fire. I sustained third degree burns to my head and face from no protection beyond my hood; second-degree steam burns to my upper arms from body sweat; and second-degree thermal burns to my forearms and left hand.



This was due to heat entering between where the coat and glove meet. I also had second-degree burns to my lower back, left thigh area, and left calf area.

I spent 34 days in the burn unit, a week on a ventilator to clear my lungs from the one breath of air. I underwent seven surgeries while hospitalized. After release from the hospital, I have had numerous return stays for additional in-patient and out-patient surgeries. To this date, I have endured 40-50 surgeries and surgery that is still necessary. Potential complications are still possible such as lung cancer from the smoke and an increased risk of skin cancer to the grafted areas on my body.



NOTES from Rob Kokko

From 1994-2002 I worked as a volunteer fire fighter in Fraser, Michigan. It was a combination department. The vollies supported fire suppression along with the Public Safety Officers.

Starting on March 3, there was a string of six or seven arson fires in a one-mile radius, all of them were at or near apartment complexes. In the middle of the early mornings of March 3rd and 4th, I responded to fires from my home at approximately 3:45 a.m. My gear was still wet from the previous day fires. Upon arrival to the first building there was heavy smoke coming from door of multi-dwelling apartment complex. Fire was located in the basement storage area. There was a line advanced to the bottom of the stairwell. First responding members were retreating from that area and face-to-face communications revealed that they did not find the fire and that they needed to rest and get new bottles (SCBA).

I met with another member and advanced the hose line to the fire where we found several storage units on fire. We put out all remaining fire in basement, and went outside with another member and reported to the company officer that basement fire was extinguished. We then went back into the apartment complex above the fire floor to find hot spots and extinguished those from the second floor, along with overhaul operations. There were still smoke-filled rooms and my low- pressure alarm went off. The company officer said to rest, get another air cylinder, and report to the other company officer outside, that he and said member were going to continue the overhaul.

I reported all details to the outside officer and went to get a fresh cylinder. I met up with David Sutton, who said he was the outside vent crew, and then the next fire call came in. The outside company officer ordered me, Dave Sutton and another member to go with the Public Safety Officer to the other fire and that mutual aid was on its way from another outside department and to stretch in with them.

Upon our arrival to the second building fire, we arrived on scene approximately 500' away from the other building with the Public Safety Officer. When we arrived on the scene, the entrance to the doorway was in the center of building. The first floor apartment on the left was totally involved. The apartment above it had heavy black smoke rolling from the windows and heavy smoke rolling from the second floor apartment on the right side with fire below it. We saw an occupant, in second story window in the smoke. Just then, our Public Safety director came out of only entrance from the center of the building. He was knocking on doors in street clothes getting occupants out when he stopped us and said an elderly woman was trapped on the second floor. He said, "If you can get to her right away, get her --- if you can't, I want you guys out of there." Without a hose line, radio, or tools, we masked up and went for the second story apartment. But we found the door locked. We checked door for heat and went into the apartment. Dave had the wall. I did a search out in center of room we said "Fire fighter, anyone in here?" I heard coughing ahead of me to the right, near front of the building and followed the sound. I said, "Dave, I got her and threw her over my shoulder and stood up, and Dave and I started for the door we just came through. Dave was in front. The elderly female was over my right shoulder and Dave's pack on my left hand. When we got to the door, Dave opened the door and the heavy smoke



from the apartment ignited, rolled over, and flashed on us. The force kicked us back 10-15 feet. I had never felt such intense heat.

On the floor and disoriented, Dave yelled to find the front window, but we retreated when the flames engulfed us. We thought we were going to the front window. (Guys from the outside later said that they saw all front apartment windows blow out and flames engulfed the windows). We hit a wall and followed it. We had to abandon rescue and get ourselves out. We found a door, sink, toilet, tub, and window above the tub. We shut the door behind us and broke window out. At one point we tried to break off the window and later found out it was mortared in. Trapped, with fire rolling over our heads, we were yelling for help. The low-pressure alarm went off, and I later passed out in tub below the window. David Sutton was still fighting to get out with fire rolling over his head. Fire was in the attic above us, and impinged through the ceiling and rolled out the window. The Public Safety Officer and another officer came to back of building and tried to tell Dave to jump. Dave said, "I can't --- I'm stuck --- it's hot in here --- get me out of here!" The responding mutual aid company had fire attack from the front of the building and one of our members received radio communication to bring a ladder to back of the building to help us.

They cut Dave's pack off and lowered him out. Ten minutes later, they found me in the bottom of the window, passed out in the tub. They sent two members (without packs) in to push me up to the window and put two members on the ladder to get me out.

The next thing I remember is being bagged on the way to the hospital. I became irate. It felt like someone was sitting on my chest. It was hard to breathe. We hit the ramp at the emergency room, and that is the last thing I remember.

Dispatch called my wife to tell her I suffered smoke inhalation and was transferred to a local hospital. They told her to get someone to watch our kids and to go to the hospital. A few minutes later dispatch called back and said there is a police car in front of your house, get a neighbor to come over and watch the kids and the police will take you to the hospital. As soon as she hung up, the police officer was knocking on the door. She ran to a neighbor's house and got her to watch our kids. They rushed her to the emergency room, where she saw friends and fire fighters, crying, and looking very somber. Just then the E.R. doctor came out and handed her a plastic bag that contained my wedding ring cut off of my finger. The doctor said you must hurry, you can see him before your husband gets air-lifted to U of M trauma burn center (Level1) via Med Flight. She was told David Sutton died from his airway being burned by the fire.

My wife came in to see me. She said I was sedated and ready for the flight. She said my hands, neck, back and arms were bandaged and bleeding through the gauze; that my ears were turned-in like charcoal briquettes and covered in soot. My gear was cut-off and placed under my gurney.



I spent the next 35 days in the burn unit and was not expected to make it the first few weeks. The second day they told my wife to start planning the funeral. I sustained full-thickness burns to over 35% of my body (hands, neck, head, back and arms). My helmet burned to my head.

I wanted to know why and how I was burned so badly. I had responded to numerous fires and this never happened! Recovery was slow. It took 15 months before returning to my trucking company job and there was uncertainty about whether I could ever return to work as a fire fighter --- my dream.

Among the many blessings was my wife that never left my side. I did not see my kids for 27 days, (they were 4 and 7 at the time). Fortunately, I had a full recovery and eventually went back to the City of Fraser and my truck-driving job. Almost three years later, I landed my dream job of becoming a full-time fire fighter with the Clinton Township Fire Department, IAFF local 1381, and have been with them for nearly five years.



NOTES from Jeff Meston

Cedar Fire On October 29, 2003, a 38-year-old male career fire fighter (the victim) was killed and a 48-year-old male career Captain was severely injured when fire overran their position. The incident occurred during the protection of a residential structure during a wildland fire operation that eventually consumed more than 280,000 acres. The victim and his crew were part of a task force assigned to protect a number of residential structures located along a ridge on the flank of the fire. The victim's crew was in the process of preparing to defend the structure when the fire made a slope and wind-driven run through heavy brush directly toward their position. The crew retreated to the residential structure to seek refuge from the oncoming fire. Two of the four crew members were able to get into the structure while the Captain was attempting to assist the victim as the fire reached their position. The victim died near the structure and the Captain, who was seriously burned, had to be assisted into the structure by the other crew members.

NIOSH investigators concluded that, to minimize the risk of similar occurrences, fire departments and fire service agencies should:

- ensure that the authority to conduct firing out or burning out operations is clearly defined in the standard operating procedure (SOP) or incident action plan (IAP) and is closely coordinated with all supervisors, command staff and adjacent ground forces
- ensure that all resources, especially those operating at or near the head of the fire, are provided with current and anticipated weather information
- stress the importance of utilizing LCES (Lookouts, Communications, Escape Routes and Safety Zones) to help identify specific trigger points (e.g., extreme fire behavior, changes in weather, location of fire on the ground, etc) that indicate the need for a crew to use their escape route(s), and/or seek refuge in a designated safety zone
- ensure that, at a minimum, high-risk geographic areas are identified (e.g.; topography, fuels, property, etc.) as part of the pre-planning process and provide this information to assigned crews
- ensure that incident command system (ICS) span-of-control recommendations are maintained
- consider the implementation of a carbon monoxide-based monitoring program for wildland fire fighters
- Additionally, state agencies, local municipalities and community organizations should consider developing statewide guidelines and local community plans for managing fuels in the wildland/urban interface
- Fire departments and fire service agencies should provide members with annual medical evaluations consistent with NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments
- Standard setting bodies (e.g., NFPA, NWCG, etc.) should consider developing a national standard that fire fighters can utilize during wildfire incidents for identifying and marking wildland/urban interface properties based on the ability to defend the structure(s) located on that property



NOTES from Bryan Winzer

Reflecting on the incident, the following instructional points are relevant:

Size Up:

Always perform a size up and know a secondary means of egress.

Balloon Frame Construction:

Balloon frame construction and the presence of knee walls on the top floor concealing the fire until the point of flashover

Communication:

Communication from outside teams to inside teams is critical. There was a large body of fire visible on the outside of exposure 3. Unfortunately, inside teams did not receive that information and there was no visible fire inside at the time. Also emphasize communication from inside teams about inside conditions to incident commander.

PPE:

Gear was wet because I got it with the hose line. Body sweat inside PPE contributed to steam burns.