

# Sand 2 Incident, Firefighter Heat Injury (Blisters)

## Facilitated Learning Analysis

July 18, 2010

### Incident Overview

On July 18, 2010, a Firefighter was assigned to the Sand 2 Fire as a member of an U.S. Forest Service Hotshot Crew. The Firefighter was deployed under the direct supervision of a Captain with a Superintendent in overall command of the Hotshot crew. While constructing direct fireline, the Firefighter was operating a chainsaw cutting on a fallen log and was standing in hot ash while performing this task. The Firefighter began to feel heat through his boots and would from time to time back off to allow some cooling to take place and then step back into the ash to work again.

At the end of their shift the crew began a 2 ½ to 3 mile hike out from the fire to their crew trucks. The Firefighter, at about the half way point out, began to feel discomfort and pain in his feet and attributed this to blisters. He made no notification of his foot pain to his supervisor at that time. Later that night at the facility where the crew was staying the Superintendent determined the Firefighter was in no condition to continue to work on the incident due to his condition of what appeared to be blisters at that time and would require medical attention, and made arrangements for him to demob and be transferred back to his home unit. Arrangements were made through the Forest dispatcher and District Fire Management Officer to demob the Firefighter from the incident. A Firefighter from the home unit was dispatched to the fire to transport the injured employee back from the incident. There was no indication at this point the Firefighter had suffered any type of burn injury. The Superintendent and a few of the emergency medical technicians on the crew had examined the Firefighter's feet and determined that he was suffering only from blisters. It was not until a day later when the Firefighter returned home and visited a medical facility, that it was determined he had suffered burns on his feet. The Firefighter is a first year (season) Hotshot.

At the time of this incident, the Firefighter was wearing all required PPE (Personal Protective Equipment). There was no medical unit assigned to this fire incident where he could receive immediate medical attention as this incident did not have a fire camp or base. The Firefighter received treatment from a burn center after initial treatment at the local Medical Clinic.

Lessons Learned:

Firefighter

What can I do differently next time?

If I was in a situation where I felt either unsafe or uncomfortable, I would work to mitigate the hazard and or improve the comfort level.

If I was doing this same task again, I would ask another crew person to assist me in clearing away hot ash to bare soil with a fire tool so that I could work in that location in a safe and comfortable manner.

Superintendent:

What can I do differently next time?

Although I advised my Division Supervisor of the situation with the Firefighter, I later learned that the Incident Commander was not aware of the demob. Next time I will make sure the IC is aware of this kind of incident.

I will continue to make sure my crew is aware of and knows their options regarding working in an unsafe situation. I conduct daily and weekly safety sessions with the crew and always emphasize that any personnel that do not feel safe performing a given task should always speak up and make the concern known to a supervisor.

I will also emphasize to the crew not to keep any injury and or painful situation to themselves and to let their supervisor know immediately.

Recommendations:

- Be observant for hazardous work locations and take every opportunity to mitigate those hazards.
- Always inform a supervisor when feeling any pain while walking or performing work.
- EMT's should consider mechanism of injury (heat) when evaluating blisters.
- Communicate with IC.
- Seek other medical opinions immediately.

**Review Team Participants:**

Tom Sherman, Unit Aviation Manager, California Desert District

Larry W. Brown, Fire Prevention Officer, San Gabriel River Ranger District

Photos indicate condition of firefighter boots



Photos show firefighter's nomex pants, fire shirt, 2 pair of socks, gloves and equipment bag  
Blue arrow points to light under socks. Red arrow points to heavy outer socks. Green arrow points to yellow fire shirt and nomex pants.



Photo of Blisters on Firefighter's feet taken on July 18<sup>th</sup>

