

Facilitated Learning Analysis

(Motor Fire CA-SNF-2119)

Date/Time: August 28, 2011 2330 hrs.

Location: Division P on the Motor Wildfire, Stanislaus NF portion of the fire. In a side drainage off of Ned's Gulch.

Employee Title: Sawyer

Purpose: Cutting Fireline

Details: During direct fireline construction on an active portion of the Motor wildfire a sawyer on a type 2IA Handcrew partially bucked a log that when stepped on by a fellow firefighter caused it to break free and roll down hill and hit 4 people. The individual who stepped on the log tried to stop it from rolling and was rolled over twice by the log in his attempt to save his fellow crewmembers. All five people suffered bumps and bruises. One person suffered cuts to the head and twisted a knee (person who tried to stop log from rolling). This person was taken to the hospital and was subsequently released back to duty the same night.

While engaging the fire with fireline construction the first two saw teams cut their way past the log but did not cut it. The third saw team while waiting for the 2 saws to get ahead decided to put in a partial buck of a downed white fir log approximately 30-40 ft long, he put in a partial buck that left a section 15 feet long left to be finished up when the lower saw teams had cleared the area below. The section was measured onsite with diameters on the small and large



Figure 1. Log section that rolled over firefighters.

end being 15" and 17". The weight was estimated between 900-1000 lbs. After cutting the log another firefighter (Squad Boss) who was working with the saw teams stepped on the partially cut log to make walking easier due the very steep slope (85% measured with clinometer on scene) this action caused the log to break loose and roll down hill towards saw teams 1 and 2 who were cutting below. The squad boss seeing what was happening made a split second decision to try to grab around the log and make an attempt to stop or at least slow the log down before it hit his fellow crewmembers. During this the squad boss was pulled over the log and was rolled over at least twice from his recollection. The log continued down the



Figure 2. This photo shows the slope of the terrain the crew was working on. (85%)

steep slope and through standing brush and made contact with the lower crewmembers and rolled down into the bottom of a small drainage approximately 66' feet from the point of release. After all the motion had ceased the remaining crewmembers moved immediately into emergency 1st aid assessments and evacuations off the line. There were 3 hotshot crews in the vicinity of the incident and each crew performed very well in expediting the extraction of injured people off the fireline. It was noted that each crew took a role in the process from keeping the active burning fire in check so it would not threaten the whole operation, and the remaining crews cutting a "P" line up

to the road for the shortest and quickest way to safety. Due to the standardized training for emergency

evacuation each of these crews' drills in made the operation go very smoothly with very little wasted time. The division Safety officer was on scene within minutes of the incident and helped with the evacuation process.

Lesson(s) Learned:

- **Nighttime conditions:** Even though the crew had seen the terrain during daylight hours the sawyer could not make an accurate assessment of how well the log was secured and what the wood condition of the log was due to the limited light conditions even when using a headlamp. The captain did recognize the possibility of the log rolling by stopping the sawyer but did not warn the saw teams working below.
- When working at night or in an area where an individual cannot see what is supporting a log that has been partially bucked and combined with what degree the log is in decay crew members other than the sawyers will not work below or around such logs until the log can be safely secured. (When the cut was stopped the log gave no sign of rolling, the remaining wood was broken when the log was stepped on by an individual who was not a part of the saw team.) In the future logs that have the potential to roll when bucked should be secured before starting the bucking cut.
- **Steep Terrain:** This incident occurred on a slope that measured 85%. Once a solid object starts in motion the likelihood of it being stopped is very slim. Any activities that could place firefighters in this situation need to be evaluated very carefully and all the options must be discussed before placing firefighters in these situations.
- **Cutting Area Control:** Stressing that cutting area control is not just for felling operations and applies to bucking operations as well. It is the sawyer's responsibility to keep people from entering into an area where hazards exist. This includes keeping supervisors and other personnel clear of the area as long as a hazard exists.
- **Saw team deployment:** All three saw teams saw this log and one of the first saw team members ask the third saw team to cut it. The three saw teams were cutting in a wedge type saw cut at this time. In the future when a situation like this comes up it would be beneficial for the saw teams to leave only one saw team to cut this small area and have the other two move to an area where they can cut safely and not be in the path of rolling material.

- Understanding that there is no one solution for dealing with every situation but recognizing the potential for hazards and mitigating those hazards before starting or completing work is a must. (This situation happened so fast that a warning to the lower saw teams was not able to be given prior to the log rolling. Once the log started to roll warning shouts were made alerting the saw teams below.)
- **Emergency Evacuation Procedures:** The training by all the crews in dealing with medical evacuations was very productive with each crew taking a role in evacuating the injured firefighters off the line. Because of their training and practice there was very little wasted time throughout the evacuation process given the rough terrain, dense vegetation and nighttime conditions that everyone was faced with.

Figure 3 Photo shows the original position of the log before it rolled. Arrow points to the direction the log rolled.



FLA Conducted by: Burt Stalter