

# GREEN SHEET

## California Department of Forestry and Fire Protection

### Informational Summary Report of Serious CDF Injuries, Illnesses, Accidents and Near-Miss Incidents



#### WILDLAND FIRE Near Miss Private Bulldozer Rollover

MAY 31<sup>st</sup> 2008

#### SUMMIT INCIDENT

*CASCU 002548 Incident*  
*CACZU 004867 Investigation*

#### NORTHERN REGION

A Board of Review has not approved this Summary Report. It is intended as a safety and training tool, an aid to preventing future occurrences, and to inform interested parties. Because it is published on a short time frame, the information contained herein is subject to revision as further investigation is conducted and additional information is developed.

## SUMMARY

On June 1<sup>st</sup> 2008 at 1630 hours, a private D6mxl high track bulldozer with operator was working on the Summit incident fire suppression repair. During movement on the line, the dozer ran up and onto a hidden root ball. The dozer slid off of the root ball with its momentum causing the dozer to turn onto its side in loose soil. The dozer operator was not injured. The dozer was winched upright, inspected by a mechanic, and found to be undamaged. After minor preventive maintenance the dozer was returned to work on the incident.

## CONDITIONS

### Weather Conditions:

Weather taken at the Los Gatos remote automated weather station (RAWS) located 10 miles north of the incident were as follows,

Winds: North east at 4 mph with gusts to 12mph.  
Temperature: 67 degrees F.  
Relative humidity: 43%

### Fuel Conditions:

Fuel model 4 (chaparral) with mixed pockets of fuel model 10 (knob cone pine)  
10 hour fuel stick 9.8 %

### Site Conditions:

Elevation: 2533 feet above sea level  
With east aspect slope of 13 to 15%.  
The dozer line width was four blades wide in non-compacted sandy soil.

### Equipment Conditions:

The dozer was a Caterpillar D6mxl high track with a fully enclosed cab and roll over protection system (ROPS). The dozer was in good condition and had all required safety equipment.

## SEQUENCE OF EVENTS

The private dozer arrived on the incident on May 23<sup>rd</sup> 2008. The dozer worked several 12-hour shifts on line construction with two operators then transitioned to the suppression repair group after the fire was contained. On June 1, 2008 at 0730 hours, the dozer operator reported to the command post for briefing. The dozer was assigned to the fire suppression repair group working in Division Alpha. The dozer's assignment was to scatter piles of debris and redistribute them over the finished wide fire line. At 1630 hours the dozer was working on a 13% slope with loose,

sandy and non-compacted soil, breaking up large piles of debris that contained brush, trees and root balls. The pile was about 4 to 5 feet tall. During this operation a large hidden root ball that was approximately 3 feet tall by 4 feet wide became dislodged. While turning the dozer on the debris pile, the root ball worked its way under the left grouser pads. Acting as a fulcrum, the root ball lifted up the uphill side of the dozer. The dozer then slid off the root ball and pile causing down hill momentum. This also increased the slope of the side hill. The right side of the dozer then dug into the sandy soil stopping the slide of the dozer. When the dozer stopped sliding it transferred the momentum causing the dozer to come to rest on its right side. The dozer had full roll over protection and its blade was down at a straight angle. The uninjured operator self extricated thru the unlocked door and reported the incident. The dozer was left in its position until it was evaluated by ground support. The ground support unit leader, a qualified agency Heavy Fire Equipment Operator, recommended leaving the dozer in place for the night. On June 2<sup>nd</sup> 2008, the ground support unit leader and two agency dozers with winches up righted the dozer with out further damage. A licensed heavy equipment mechanic paid for by the vendor inspected the dozer and found it undamaged including all cab glass, lights and running gear. After a routine oil change the private dozer returned to work on the incident.

## INJURIES/DAMAGES

There were no injuries to the dozer operator. The dozer was inspected by an authorized mechanic and minor preventive maintenance was performed. The dozer returned to work on the incident.

## SAFETY ISSUES FOR REVIEW

- Review section 7761.c of the CAL FIRE Emergency Incident Handbook that states privately owned bulldozers under agreement with CAL FIRE shall have a fully trained and qualified fire supervisor available in the immediate area who is assigned to direct the private bulldozer operator at all times during any suppression activities. These operators **will not work** on the fire line with out supervision.

## INCIDENTAL ISSUES FOR REVIEW

- Provide dozer swampers for use as look outs / extra safety officer.
- Include fire line repair in Section 7761.c of the CAL FIRE Emergency Incident Handbook.
- Continue the use of roll over protection systems on dozers.
- Continue the practice of keeping all items in the dozer cab secured and make sure that all external doors remain unlocked during operation.
- Continue annual training of both private and agency equipment operators.