

GREEN SHEET

California Department of Forestry and Fire Protection (CAL FIRE)

Informational Summary Report of Serious CAL FIRE Injuries, Illnesses, Accidents and Near-Miss Incidents



**VMP Live Burn
Near Miss**

January 3, 2012

Corte Madera Ranch VMP

12-CA-MVU-000132

12-CA-MVU-000065

California Southern 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.

Lookouts

Communications

Escape Routes

Safety Zones

SUMMARY

San Diego County Sheriff's helicopter Copter 10 was assisting CAL FIRE and San Diego County Fire Authority ground resources on the Corte Madera Ranch Vegetation Management Program (VMP) burn in southeast San Diego County. The VMP project has been ongoing in the San Diego Unit and the current project portion covers some 600 acres with multiple burn plots. Operations on this date began at approximately 0930 hours. The Crew aboard the helicopter at the time of the incident consisted of a San Diego County Sheriff's pilot and a CAL FIRE Helitack Captain in training. At approximately 1020 hours, the helicopter sustained moderate heat damage to the front exterior surface area of the helicopter's cockpit during flight operations. The pilot was able to land the helicopter at a nearby Helibase without further incident or injuries. After cleared by a Sheriff's helicopter mechanic, it flew back to home base without incident.

CONDITIONS

Weather conditions from the National Weather Service spot weather forecast were forecast to be clear with temperatures from 70 - 74 degrees. Minimum humidity's were expected from 5 - 10 percent and northeast winds at 5 MPH in the morning, becoming southeast from 5 - 10 MPH later in the day. The fuel model for the area is Type 4 with cut and piled windrows, as well as live 6 - 8 foot standing chemise. Live fuel moistures were averaging 72-75%. There is little to no understory. The topography consists of moderately sloped terrain at an elevation of approximately 4200 feet. See attached map. San Diego County Sheriff's Copter 10 is a 1973 Bell 205 A1 ++ equipped with a 370 gallon belly tank.

SEQUENCE OF EVENTS

On January 3rd, 2012 a 41 acre plot of a 600 acre burn was conducted for the Corte Madera Ranch VMP project. The ranch is located in the southeast portion of San Diego County and is approximately 4700 acres in size. The morning briefing of CAL FIRE and San Diego County Fire Authority resources occurred at the entrance to the Corte Madera Ranch at about 0805 hours and was conducted by the Incident Commander. The Incident Action Plan (IAP) was reviewed and assignments were given to the various ground resources. A map was displayed of the burn block and a brief discussion of a need for air resources took place. No aircraft were initially assigned to the prescribed burn, however, the Operations Chief contacted the Gillespie Helibase asking if they were interested in the training opportunity. The senior Helitack Captain agreed and Copter 10 was then added to the IAP and everyone at the briefing was informed of the additional resource. The general briefing concluded at about 0825 hours.

A second briefing was conducted at 0855 hours with all ground resources present to discuss more specifics regarding the firing plan and how the burn would proceed. The flight crew was not present at the second briefing, as they arrived in the area near the conclusion of this briefing. They were directed to do a low level orbit over and to the south of the area of the burn block to ensure the area was clear of immigrants and livestock. As they orbited, they were given a general

description of the burn block over radio, and then directed to find a landing zone in a nearby meadow and await further direction.

At approximately 0930 hours a test fire was conducted in the southwest corner of Block A of Unit 6 to complete the Go-No-Go checklist. Following this successful test burn, two firing teams began igniting windrows of dead, cut and stacked vegetation along the west and north perimeters. Winds at the time had not developed as yet, as forecast, reaching only 2-3 MPH from the northeast. As the firing teams proceeded, the windrows exhibited intense burning but the standing vegetation would only carry fire at a very low rate of spread. Using Veri pistols, the firing teams attempted to ignite additional fire to the interior of the burn block to help build additional heat in an attempt to draw the fire into the standing vegetation. The wind on the burn had now ceased and the fire would not carry into the standing vegetation.

At approximately 1005 hours, Copter 10 was requested via radio to assist with burning operations, specifically for use of their rotor wash to add intensity to existing fires. Before departing for the mission, a brief discussion took place between the Sheriff's pilot and both the senior and training Helitack Captains regarding the assignment. It was discussed that while these personnel had never performed nor seen the technique personally utilized, the senior Captain knew it had been accomplished in previous instances. It had also occurred at this specific burn site during an operation last year with another CAL FIRE helicopter. It was agreed that they would proceed with the maneuver and the Helitack Captain in training was assigned to the front left seat with the pilot for the operation as a training evolution, while the senior Captain and two Firefighters remained at the temporary helispot.

At approximately 1015 hours, Copter 10 arrived over the southwest edge of the burn plot and was instructed via radio to use rotor wash to put some wind on a specific area of the perimeter to help get the fire established in the standing vegetation. Copter 10 approached from the southwest, facing due north, as they neared the area burning. Copter 10 hovered approximately 40 feet west of the fireline and 40 feet above ground level (AGL), for approximately 40-60 seconds. During the hover maneuver, the ground fire intensity in the windrows increased dramatically, from estimated vertical flame lengths of 5-10 feet to horizontal flame lengths in excess of 35-40 feet, igniting standing vegetation and resulting in a growing fire towards the interior of the burn plot.

Because of the resulting affects of the aerial maneuver, the Operations Chief requested that Copter 10 move to the northern edge of the burn plot and perform the same maneuver for the same desired results. Just prior to this radio traffic, the Sheriff's pilot and Helitack Captain in training on board both described the temperature in the cockpit as normal during the initial 30 to 40 seconds of the hover. However, presumably because the helicopter was oriented with the right side of the helicopter closest to the fire's edge, the pilot felt the radiant heat on the side of his face through the open side window as he began moving the aircraft to the north toward the center of the burn block.

As the helicopter continued in a northerly direction, the pilot noticed frosting and deformation to the plastic chin bubble below his feet and the smell of melted plastic. The pilot immediately

contacted Operations via radio and stated he had received some damage to the aircraft and would need to return to the incident helispot for inspection.

At approximately 1050 hours Operations was contacted via radio by the senior Helitack Captain and informed that Copter 10 was out of service and measures were being taken to have the helicopter inspected by maintenance personnel prior to returning to base. It was subsequently inspected and released back to Gillespie Helibase.

INJURIES/DAMAGES

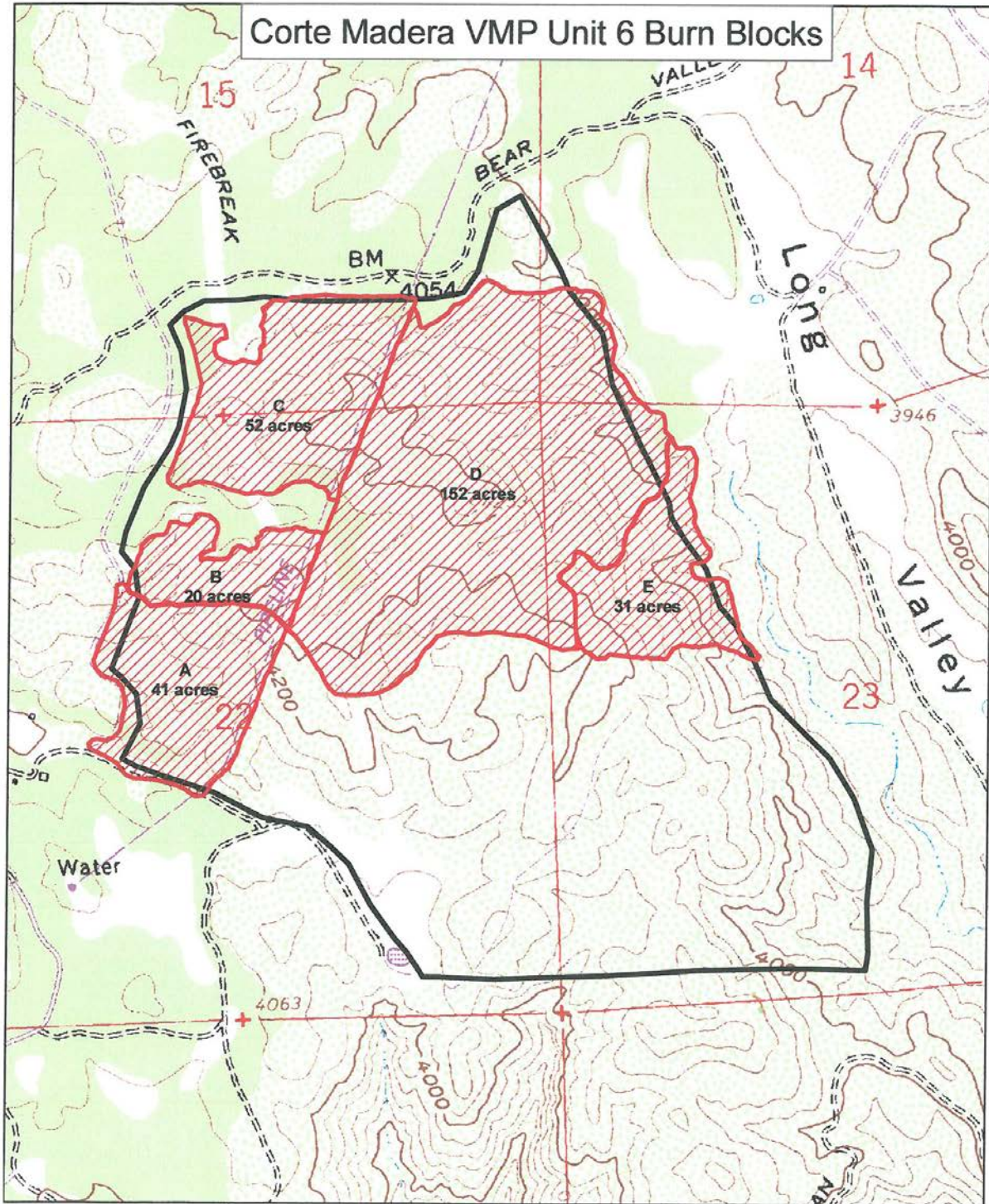
Upon inspection of the aircraft, it was determined that the pilot's side (right seat) chin bubble was distorted and had a frosted / opaque look across the middle of the bubble. The Fire Captain's side (left seat) chin bubble was distorted but had no change in color. The nose of the aircraft on what is described as the battery compartment door which is painted with a 10 was distorted at the bottom side center line and the paint appeared to have been damaged from heat exposure. See photos. After a thorough inspection by the aviation mechanic on site, it was determined that Copter 10 was airworthy and it was flown back to Gillespie Helibase by the pilot. The CAL FIRE Helitack Crew was flown back in a separate helicopter along with the aviation mechanic. There were no injuries as a result of this incident.

SAFETY ISSUES FOR REVIEW

- Review VMP/live fire use Policy 7030
- Review Helicopter Operations Policy 8344 and appropriate use of Rotary Wing Aircraft during VMP operations.
- Utilize Risk vs. Gain analysis appropriately, particularly in situations of unfamiliarity with given conditions or requested actions.
- All personnel must receive a detailed briefing when involved with any incident operation, particularly when preparing for a planned operational period.

INCIDENTAL ISSUES/LESSONS LEARNED

- Any anomalies resulting during emergency operations, particularly regarding aircraft, should always be fully evaluated and determination made to safely continue operations.
- Past experience is always valuable in considering actions during high-risk events or evolutions. However, performing inappropriate actions or having knowledge of those actions through experience is not a substitute for appropriate adherence to policy and safety guidelines.



Quad: Descanso
Sections: 15 & 22
Township 16 South
Range 4 East

 Burn Blocks
 Corte Madera Unit 6



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Right Seat Chin Bubble Damage



Nose and Battery Door Damage

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