

Safety Alert: 72-Hour Notice

Incident Name: **Citrus Fire**

Location: **Riverside Ranger Unit, California Department of Forestry and Fire Protection**

Incident Number: **RRU #58691 & BDF #7838**

Unit Involved: **USFS, San Bernardino National Forest, Fire Engine Operator (Engineer) Paul Mandolini**

Nature of Injury: **First Degree Burns to facial area, forehead, front and rear of neck, and back of both hands**

Initial Investigator: **Mike Cassidy, USFS San Bernardino National Forest (Level II Investigator, qualified Type 2 Safety Officer, qualified Type 2 Operation Section Chief)**

Incident Investigator: **Sam Mazzo, CDF Unit Chief, San Denito/Monterey Ranger Unit**

Date & Time: **July 22, 2004 approximately 1540**

At approximately 1540 hours on July 22, 2004 San Bernardino National Forest (BDF) Engine 39 was involved in a near miss, potential serious incident while taking suppression action on the Citrus Fire in Riverside County, California. The Citrus was an assist fire by the San Bernardino National Forest to the Riverside Ranger Unit, California Department of Forestry and Fire Protection and Riverside County Fire Department. Extreme dry weather associated with helicopter rotor wash and a sudden wind shift (approximately 180 degrees) created a fire whirl, which was the primary cause for the near miss incident. The Engine sustained paint and plastic damage on the driver's side front fender and both driver side cab doors when it was caught in a fire whirl. Air hoses and other wiring were also damaged. The Engineer assigned to the engine suffered first degree burns to his face, neck and back of both hands before he could get inside the cab on the Captain's side of the Engine. After field medical evaluation the Engineer was transported by ground ambulance to Arrowhead Regional Medical Center in Colton, California for treatment. The engine was inoperable due to the damage to the airlines and was towed to the Cranston Work Center on the San Jacinto Ranger District, San Bernardino National Forest.

Interviews taken by fire personnel that witness the event stated that while BDF Engine 39 was taking suppression action on the Citrus fire and assisted by BDF Engine 15, when two spot fires started on the east side of the dirt road extension of Fairview Avenue, east of Hemet, California. The spot fires were in a flat field with very light grass and small vegetation. The west side of the dirt road extension consisted of citrus groves with little to no ground cover. After a quick size-up by the Captain on Engine 39 the two engines established an anchor point at the end of the grove on the main fire's edge, which was burning away from them. The two crews began to flank the spot fires that had burned together from their established anchor point. Shortly after engaging in a flanking attack of the spot fires a CDF helicopter flew over and made a drop across the head of the now combined spot fire. Witnesses state the rotor wash from the helicopter caused the spot fire to begin spinning creating a fire whirl. A Battalion Chief, assigned as the Agency Representative for the Forest Service observed that the fire whirl was created by the rotor wash of the helicopter and tried to notify the crews of the situation on the assigned tactical frequency. A sudden wind shift of approximately 180 degrees pushed the fire whirl across the

burn in about 5 to 7 seconds and appeared to engulf Engine 39. The Engineer jumped into the cab of the engine and drove it out of the burned area. The engine came to sudden stop and locked up because the airlines had been damaged and the braking system lost all air pressure. The assigned Safety Officer on the incident for Riverside CDF contacted the Forest Service Agency Rep on a status update of the incident. The Engineer was treated at the accident location by trained fire personnel and transported by ground ambulance to the assigned medical treatment center. The remaining fire personnel on Engines 39 and 15 conducted a safety briefing and arrangements were made to transport the crew and Engine 39 to the Cranston Work Center.

CDF initiated an additional fact-finding and safety review lead by Sam Mazzo, Unit Chief for San Denito/Monterey Ranger Unit and a 3-person team. Initial finding stated by the review team stated that no safety violations could be found and that the Engineer was not at fault for the incident. When the fire whirl developed the Captain of Engine 39 pulled both engine crews that were working the spot fire into the assigned safety zone. LCES was followed, the safety zone was identified along with the assigned escape route. The CDF safety review team determined that a safety "Blue Paper" was not required.

The Engineer was released from Arrowhead Regional Medical Center at approximately 2030 on July 22, 2004 with no restrictions except rest with authorization to return to full fire fighting duties on Tuesday July 27, 2004. X-rays were taken to ensure no potential lung or internal damage occurred related to the incident. He was treated for minor burns to his face, neck and the back of both hands. Additional information and pictures will follow early next week.

Rocky W. Opliger
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