

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



Burnover/ Entrapment with Burn injuries

August 8, 2014

LODGE Fire Complex

14-CA-MEU-007202

SART

14-CA-MEU-007575

California Northern Region

A Board of Review has not approved this Informational 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

On August 8, 2014, at approximately 1830 hours, three local government firefighters, and five CAL FIRE inmate crewmembers, were involved in a burnover while assisting to suppress the LODGE Complex fire in Mendocino County. The firefighters and inmate crewmembers suffered minor burns to their hands, back, arms, neck and face. Two Type III fire engines and a utility vehicle sustained radiant heat damage to the front and passenger sides of the vehicles. The injured firefighters and inmate crewmembers were treated and transported by air and ground to appropriate receiving hospitals for evaluation and treatment. All of the firefighters and inmate crewmembers were released from the hospitals within 24 hours.

CONDITIONS

Weather:

Taken from the local CAL FIRE portable #14 RAWs located at Cahto Peak approximately seven miles south of the burnover location at 1849 hours:

- Temperature: 70° Fahrenheit
- Relative Humidity: 29%
- Wind Speed: 8 miles per hour, gusts to 17, direction: northwest

Taken at 1830 hours south of drop point 11 by FOBS, 1.6 miles north of the burnover location:

- Temperature: 72° Fahrenheit
- Relative Humidity: 28%
- Wind Speed: 3-5 miles per hour, direction: west

Topography:

Top of the ridgeline with steep slopes on either side, slopes ranging from 60%-90%.

Fuel Type:

The timber stands included conifers and hardwoods, and the consistent fuel bed averaged 10 feet to 75 feet in height, Fuel Models included 4 through 10.

Fire Behavior:

A sustained crown fire ran through the timber canopy, followed by a lateral and ground fuel fire with frequent spot fires.

SEQUENCE OF EVENTS

On August 5, 2014, a CAL FIRE Golf strike team (STG-1) was assigned to the LODGE Complex fire in the Mendocino Unit. On August 7, 2014 at 1700 hours, a local government Charlie strike team (STC-1) consisting of E371, E373, E374, E377, E382 and strike team leader with a trainee [STEN and STEN (T)] was released from the DAY Incident in Shasta County, and reassigned to the LODGE Complex.

On August 8, 2014, at 0100 hours, STC-1 arrived at the LODGE Complex and were assigned to a rest period from 0100 hours 0600 hours. At 0700 hours, the STC-1 strike team leader and trainee, along with four captains from STC-1, attended the morning operational briefing at the LODGE Incident Base. STG-1 was assigned to Division P (Div. P) on Branch IV. STC-1 was unassigned on the LODGE Incident Action Plan for August 8, 2014. The unassigned LODGE Incident resources were placed available at Leggett Staging. While at Leggett Staging, STC-1 conducted refresher training on wildland tactics including weather observations, chain saw operations, fire line construction and firing operations.

At 1530 hours, while in Leggett Staging, STC-1 was assigned to support Div. P with the understanding they were preparing for a potential “burning out” operation. Also at approximately 1530 hours air tactical group supervisor (ATGS) “Charlie 3” and Div. P discussed a firing out operation to put in a “black line” extending 300 feet to the north and south of Ten Mile Peak. At 1640 hours, LODGE Operations, Branch IV and Div. P discussed a firing operation from Ten Mile Peak south into Division W (Div. W) and north towards drop point (DP) 12 if conditions were to change. The fire conditions did quickly change. Due to the significant fire activity in the lower drainages fireline personnel initiated a defensive “backfire” operation.

At 1700 hours, STC-1 arrived at DP 12 on Div. P. The division group supervisor on Div. P confirmed STC-1’s assignment to support the “burning out” operation. STC-1 proceeded to the safety zone located between DP 11 and DP 12 to receive additional information. At the time of this report, incoming units felt they were not thoroughly briefed regarding the urgency of the situation inclusive of the change in strategy, the warnings from the air tactical group supervisor (ATGS) and the helicopter coordinator (HELCO) of the increased fire activity on Div. P.

E371 and E382 were positioned at the water supplies between DP 11 and DP 12. The remainder of STC-1, E373, E374, E377, continued to the Div. P and Div. W break. At 1825 hours, E373 arrived at the Div. P and Div. W break where a CAL FIRE engine (ENG-1) was pumping a hose lay to Div. W. E373’s assignment was to scout the area and support the firing operation. A coordinated defensive firing operation had already been initiated by STG-1 on Div. P and on Div. W by a second CAL FIRE golf strike team (STG-2). The captain from E373 and the fire apparatus engineer (FAE-1) from ENG-1 met and discussed the current operations. A small firing team from STG-1 was assembled and had fired approximately 850 feet of line north from the Div. P and Div. W break toward the southern Div. P safety zone. The remaining of the crew members of STG-1 were assigned to watch the green for spot fires.

At approximately 1835 hours, FAE-1 determined the need to escape with ENG-1 to the safety zone due to deteriorating conditions. Due to the advancing fire front, ENG-1 was unable to disconnect their suction hose and 1½ inch discharge hose. ENG-1 drug both the suction hose line and the 1½ inch hose line. ENG-1’s escape route was cut off by the rapidly advancing fire

front, forcing ENG-1 and E373 to seek refuge in a wide spot on the constructed dozer line. All of the firefighters from ENG-1 were inside of ENG-1 when the fire overran them. ENG-1 had to move approximately 50 feet to move out of the fire's path. No injuries were reported from ENG-1. One inmate crewmember from STG-1 took refuge in the front passenger side of ENG-1. A second inmate crewmember from STG-1 attempted to take refuge in the back seat of ENG-1 but encountered excessive heat, fell to the ground and sought refuge from the fire under ENG-1. Three additional inmate crewmembers from STG-1 were burned while running away from the flaming front. The remaining inmate crewmembers from STG-1 stayed with the fire captain B on the leeward side of the dozer line and were uninjured. Five inmate crewmembers from STG-1 received burns to their hands, faces, and back during the burnover on Div. P.

During this same time, E373 firefighters were out scouting the line on the Div. P and Div. W break near ENG-1. The head of the fire crested the hill and the firefighters attempted to seek refuge from the advancing fire on the opposite side of E373. The fire overran E373. One captain and two firefighter/engineers suffered burns to their hands and faces.

The three burned firefighters and five inmate crewmembers were appropriately triaged, treated and transported to a burn unit for evaluation per CAL FIRE burn policy.

INJURIES and DAMAGES

- 1 Captain suffered 1st and 2nd degree burns to the right hand and ear, 1% Body Surface Area (BSA)
- 1 Firefighter Engineer suffered 1st and 2nd degree burns to the right hand and ear, 1% BSA
- 1 Firefighter Engineer suffered 1st and 2nd degree burns to the right hand, 1% BSA
- Inmate Crewmember 1 suffered 1st degree burn to the scalp, .5% BSA
- Inmate Crewmember 2 suffered 1st and 2nd degree burns to the right hand, 1% BSA
- Inmate Crewmember 3 suffered 1st and 2nd degree burns to the right shoulder and elbow, 4% BSA
- Inmate Crewmember 4 suffered 1st and 2nd degree burns to the right elbow, earlobe & neck .5% BSA
- Inmate Crewmember 5 suffered 1st and 2nd degree burns to right shoulder and ear, 1% BSA
- Two of the Type III engines, sustained minor radiant heat damage to the front and passenger sides.
- A utility pick-up sustained radiant heat damage to the front end of the vehicle.

SAFETY ISSUES FOR REVIEW

From the Ten Standard Fire Orders:

- Know what your fire is doing at all times.
- Base all actions on current and expected fire behavior.
- Identify escape routes and safety zones, and make them known.
- Post lookouts when there is possible danger.
- Maintain prompt communications with your forces, your supervisor and adjoining forces.
- Give clear instructions and insure they are understood.

From the Eighteen Situations that Shout “Watch Out!”

- Unfamiliar with weather and local factors influencing the fire behavior.
- Uninformed on strategy, tactics and hazards.
- Instructions and/or assignments are not clear.
- Unburned fuel is between you and the fire.
- Cannot see the main fire and you’re not in contact with anyone who can.
- Getting frequent spot fires across your control line.
- Terrain and fuels make escaping to designated safety zones difficult.
- Be sure there are sufficient safety zones and escape routes.

INCIDENTAL ISSUES/LESSONS LEARNED

- Ensure incoming resources are briefed and updated on strategy and tactics.
- Recognize fuel models and terrain you are not familiar with.
- Safety zones should be appropriate for conditions, fuel types and sufficiently identified.
- Every firefighter is responsible to recognize hazards and report them. When in doubt speak out!
- Utilize Hazard Risk Analysis Sheet information (ICS-215A) and ensure it is included in the IAP.
- Acknowledge and address safety concerns when presented.
- All appropriate Personal Protective Equipment shall be worn at all times while engaged in fireline operations.



Drive in from DP 11 south towards the Division P/W break from E374 \approx 1826 hours



E373 and UT-1 looking north from ENG-1 at the Division P/W break \approx 1827 hours

Lookouts

Communications

Escape Routes

Safety Zones








From DP11 south towards the Division P/W break and Ten Mile Peak \approx 1828 hours

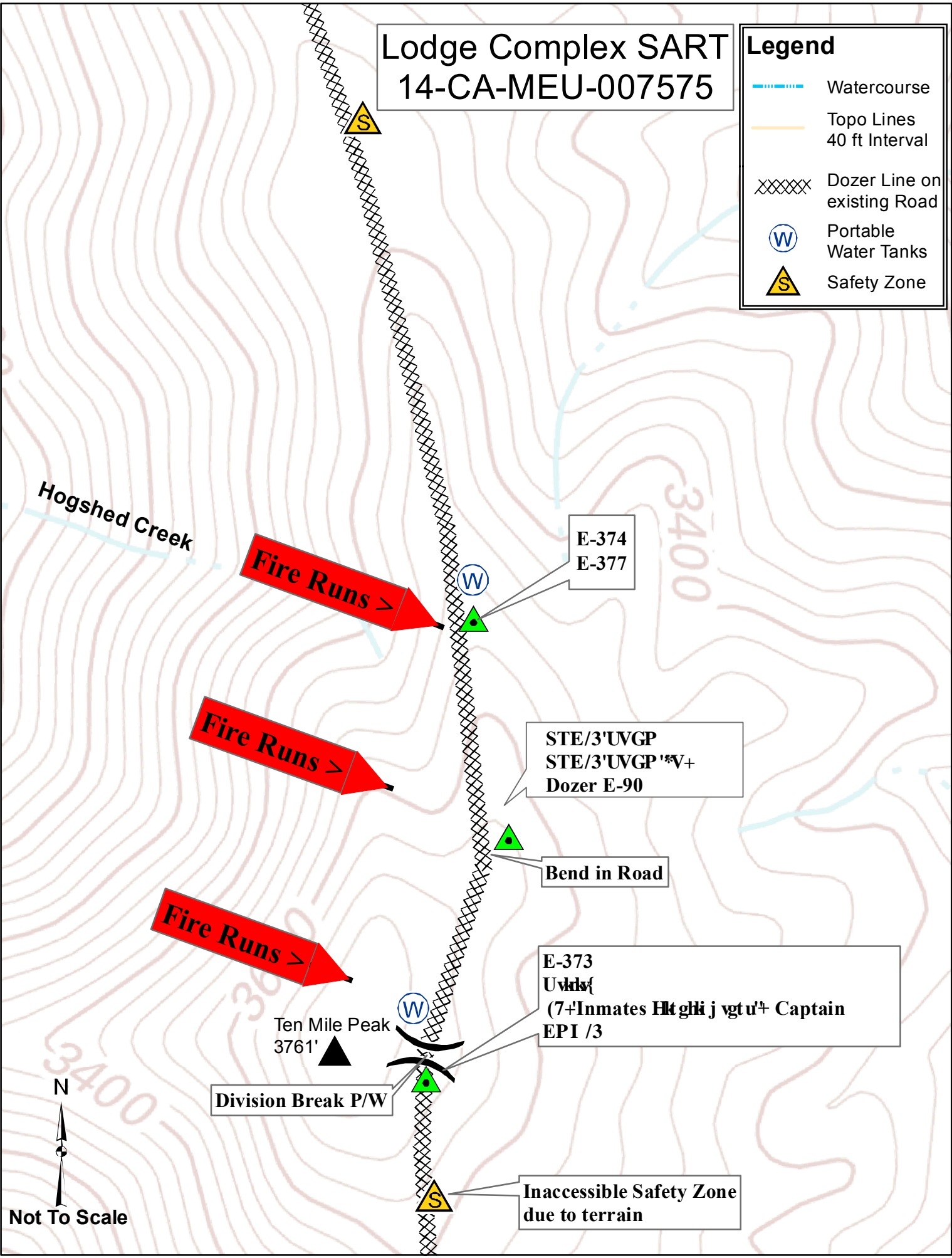


View from the bend in the road, west into the Hogshed Creek drainage \approx 1833 hours

Lodge Complex SART 14-CA-MEU-007575

Legend

-  Watercourse
-  Topo Lines
40 ft Interval
-  Dozer Line on
existing Road
-  Portable
Water Tanks
-  Safety Zone



Hogshed Creek

Fire Runs >

Fire Runs >

Fire Runs >

E-374
E-377

STE/3'UVGP
STE/3'UVGP '*V'+
Dozer E-90

Bend in Road

E-373
UVGP
(7+Inmates Hlt gli j vgt u'+ Captain
EPI /3

Ten Mile Peak
3761'
Division Break P/W

Inaccessible Safety Zone
due to terrain

N

Not To Scale