

San Ramon Valley Fire Protection District

GREEN SHEET

Informational Summary Report of Serious San Ramon Valley
Injury, Illness, Accident and Near-Miss Incident



Near-Miss Incident

Firefighters in close proximity to live electrical wire during
defensive structure fire attack operation

Incident Name	Yale Court
Incident Type	Structure Fire
Date	12/20/2009
Location	33 Yale Court, San Ramon
Incident Number	2009-0007557
Victims/Injuries	No victims, near miss situation
Loss/Damage	\$300,000 property + contents

This is a Summary Report presented by the San Ramon Valley Fire Protection District (SRVFPD). It is intended as a safety and training tool, an aid to preventing future occurrences, and to inform interested parties. At the time of this report not all investigation information was available; therefore the information contained within this report is subject to change.

Summary

This is a preliminary report subject to change as more information becomes available, but the importance of the safety message should not be delayed.

The following information is a summary of events leading up to and including a near-miss incident at a residential structure fire that involved numerous firefighters exposed to a live electrical wire in the course of a defensive structure fire attack operation. As the fire progressed, it burned through the residential drop at the A/B corner of the garage and dropped to the ground, puncturing a hose line and narrowly missing firefighters operating exterior defensive hand lines on the Alpha side of fire building in front of garage. After the wire was down, a firefighter stepped over the live wire despite repeated warnings of the incident Safety Officer. No injuries occurred as a result of the downed power line however the danger of the near miss must be addressed to reduce the chance of future recurrence.

Conditions

Structure: Approximately 1800 square foot single story, single family residential, ordinary wood frame construction with stucco exterior and wood shake roof, located at the end of a court.

Fuel Types: Heavy fuel load of ordinary home furnishings and recyclable materials inside residence. Heavy fuel load in yard surrounding residence in close proximity to structure including motor vehicles, boat, camping trailers, storage sheds, miscellaneous objects. A San Ramon Police officer on scene reported to the first in Company Officer/ IC a history of storage of bulk quantities of gunpowder inside residence for loading of ammunition by resident.

Weather: Afternoon, 50-60 degrees F, light cloud cover, light wind.

Topography: Not a factor.

Contributing Factors: Possible delay in the initial 9-1-1 call due to the occupants attempting to extinguish the fire before calling.

Fire Origin: Bedroom on C/D corner of residence. Fire was started unintentionally by a juvenile inside the residence.

Apparatus and Staffing: First due companies are E39, a Type 1 1500 gpm pumper carrying 600 gallons of water and staffed with 3 personnel (a Captain, an Engineer, and a Firefighter/Paramedic), and PM39, an ambulance staffed with two Firefighter/Paramedics.

SRVFPD's First Alarm Structure Fire response matrix for this response zone calls for a total of three Engine companies, two Truck companies, an ambulance, and a Battalion Chief. Engine and Truck companies consist of a Captain, an Engineer, and a Firefighter.

Declaration of a "working structure fire" calls for an additional B/C and an Incident Safety Officer to respond.

Second Alarm Structure Fire response calls for three additional Engines and the Air and Light unit (BS31).

Other units that responded to this incident include the Fire Chief, Battalion 3112, Fire Marshal 3120, PIO 3131, Safety Officer 3173, Volunteer 3156, and Alameda County E16.

Sequence of Events

On December 20, 2009, at 16:04:14 hours, SRVFPD Dispatch (Dispatch) receives a 9-1-1 call from an occupant of 33 Yale Court in San Ramon. Reporting party states there is a “fire in a bedroom” and that everyone is out of the house.

At 16:04:55 Dispatch initiates a First Alarm Structure Fire response, dispatching Engine 39 (E39), Paramedic 39 (PM39), Engine 34 (E34), Truck 34 (T34), Engine 30 (E30), Truck 31 (T31), and Battalion 31 (B31). While dispatching the First Alarm, Dispatch receives a radio transmission from Battalion 4512, a Battalion Chief from a neighboring agency, reporting the fire is “a worker”. Dispatch adjusts the call type to a Working Structure Fire triggering the response of an additional B/C and an Incident Safety Officer.

Dispatch assigns TAC 22 as the incident tactical channel and the incident is named Yale IC.

Dispatch receives multiple calls due to proximity of Highway 680, including off duty SRVFPD personnel on scene giving reports over cell phones.

E39 is enroute at 16:08:26. At 16:11:50 E39 arrives and reports fully involved single family residence, establishes and assumes IC, confirms “all clear” report from the occupant, gives tactical direction to T34, calls for a second alarm and declares a “defensive” operational mode. Additionally, the IC reports a Delta Side exposure, and gunpowder stored inside residence in northwest bedroom per PD on scene that had prior knowledge.

Dispatch initiates Second Alarm, consisting of Engine 31 (E31), Engine 38 (E38), BS31, and Alameda County Engine 16 (E16).

Supply lines are stretched from E39 to hydrant at corner of Yale Ct/Northland Pl.

Off duty SRVFPD personnel and an off duty City of San Jose Firefighter assist with supply lines and attack lines, moving of vehicles in close proximity to house, which created some incident confusion.

T34 positions and raises elevated master stream for defensive aerial master stream operation.

Residential drop burns through and live wires fall across front yard, narrowly missing firefighters operating exterior hand lines on Alpha side of fire building in front of garage. Hot wire bounces across ground, strikes an attack line causing a burst hose, and comes to rest across several of the attack hoses. The IC notifies Dispatch—of an immediate safety hazard and Dispatch makes a radio announcement to units on scene and units enroute. Utility Company (PG&E) is expedited.

B/C 31 arrives and Captain E39 transfers command via face to face.

The Incident Safety Officer arrives on scene and physically posts a lookout while marking the hazard with one strand of “Life Safety Hazard Tape”.

Eaves of house on Delta exposure (32 Yale Ct.) ignite due to radiant heat. E30 and E38 are assigned Delta Exposure to extinguish exterior fire and check for fire extension in attic and interior of Delta exposure. Forcible entry is made and an all clear is confirmed with no fire extension into Delta exposure structure, only exterior involvement.

Multiple hand lines and aerial master stream overtax water supply; ALCO E16 is assigned to secondary water supply from next closest hydrant at Northland Pl./Davona Dr.

A Fire Captain assigned to the Delta exposure steps over downed power line during course of his assignment despite warnings from the Safety Officer constituting another component of this near miss incident.

Two juveniles that were in the building when the fire originated were examined and released to parent.

Wall on Delta side of fire building collapses, safety announcement goes out over the radio.

Knockdown of fire called at 1651 hrs.

PG & E arrives on scene and cuts wire at 6 to 7 feet above ground and tapes ends; however the wire is still live.

A Firewatch is initiated after last units are cleared from scene.

Issues for Review / Lessons Learned

- Safety of Firefighters and public are first priority.
- Use terminology consistent with event. "Emergency Traffic" is appropriate for "immediate, life threatening danger" (OPS COMM Training Bulletin *Radio Procedures*).
- Power lines and objects they contact, including the earth, should be considered charged along the entire length of the power line. Maintain a 10' minimum radius on either side of the power line, not just from the hot end. Power lines should not be touched, jumped or stepped over, or disregarded.
- Post a lookout and follow "Life Safety Hazard Marking Tape policy" when faced with a life safety hazard (three horizontal stripes of tape).
- All Personnel **must** follow direction of the Incident Safety Officer and/or lookouts posted at Life Safety Hazard at all times.
- Personnel must not ignore or discount Emergency Traffic announcements.
- Use extreme caution when working under or near residential electrical service line as it may burn and drop to the ground.
- Large diameter hose should be used for supply line in most all building fire attacks where fire hydrants are available. Use the 2-1/2" to 4-1/2" increaser when faced with only 2-1/2" hydrant outlets.
- Smooth bore nozzles should be considered for defensive operations where penetration and volume are needed for extinguishment. (For both master streams and hand lines).
- Personnel shall avoid riding outside the cab or jump seat areas of apparatus when not in a controlled situation. Personnel are expected to ride inside apparatus or in jump seat area in designated permanently mounted seats with seatbelts fastened when responding code 3.
- When addressing building sides or divisions, use "Alpha, Bravo, Charlie, Delta" instead of "A,B,C,D".
- All personnel should report to the Incident Commander for assignment on scene. This includes off duty personnel and people from other fire departments.
- Level one accountability must be maintained at all times during the shift with accurate T-Cards for each unit listing each current crew member on the apparatus.
- Do not use personal phone or camera phone during emergency calls.
- When using aerial master stream in defensive operation, pin waterway in fully extended position.

Operational Procedures Successfully Followed

- Operations Policy and Procedure – Incident Command
- Operations Policy and Procedure – Walk Around Size Up
- Operations Policy and Procedure – SCBA Use
- Operations Policy and Procedure – Hazardous Condition Alerting

Operational Procedures to improve future performance

- Operations Policy and Procedure - Structure Fire Response Procedures
- Operations Policy and Procedure – Life Safety Hazard Marking Tape
- Operations Policy and Procedure – Personnel Accountability while Working in the Hazard Zone
- Operations Policy and Procedure - Incident Risk Assessment