

## RESERVE INCIDENT SHELTER DEPLOYMENTS

The Reserve Incident occurred on June 3, 1994. The incident was originally named the Sawmill Fire. The fire occurred on the Santa Rita Experimental Range, Arizona State Lands Department jurisdiction, just outside of Madera Canyon on the Coronado National Forest in southeast Arizona. The fire was an arson fire that began in mid-afternoon.

The fire location was a relatively flat area with roads on all four sides. The plan of attack was to fire out the roads, creating a black line ahead of the fire.

Personnel on the incident were Forest Service and Bureau of Land Management engines. The FS and BLM engine were firing along the northeast corner toward the northwest corner. About 5:00 p.m., as the crews were working west, the FS engine broke down. The BLM engine then took over the lead in firing the road. The FS crew felt that the BLM engine was firing too fast, and focused their attention on this event. There was some discussion among the FS crew and an effort made to slow the BLM engine down. Before this could happen, the wind shifted to the southeast and the fire began a hard run at the northwest corner. The BLM engine was ahead of the run, and continued on and was not involved. The FS engine crew was caught on the road with a wide flame front approaching. The crew felt that there was not enough time to escape along the road in either direction and deployed their shelters on the roadbed. The flame front passed over the crew without any direct flame applied to any of the shelters. All shelters were in good shape following the deployment.

After the flame front hit the road, the wind shifted once again and the event was over. Deployment lasted only a couple of minutes with no injuries to any of the three involved.

There appeared to be no one in charge of this incident, as an I.C. was never mentioned. Lookouts were not posted. Radio communications were supposed to be excellent, but were not utilized either in management of the incident or in prevention of the shelter deployments.

UNITED STATES DEPARTMENT OF THE INTERIOR 9200 (043)  
BUREAU OF LAND MANAGEMENT  
SAFFORD DISTRICT OFFICE

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MEMORANDUM

To: State Director, AZ940  
From: District Manager, Safford  
Subject: Reserve Fire Shelter Deployment Report

I have just reviewed a report put out by the Forest Service dated June 16, 1994 where fire shelters were deployed on the Reserve Fire and an investigation was conducted. I have some serious concerns regarding procedures taken during the safety investigation and the content of the report itself.

First of all, no BLM personnel involved in the incident were interviewed. Not even the BLM engine crew who are so prominently mentioned throughout the report. The engine crew and fire staff here at Safford were totally unaware of the investigation until it was faxed down from the State Office.

Secondly, I'm concerned with the thoroughness of the report. It seems to be contradictory in that communication was "excellent" but a BLM engine is able to get ahead of everything before a radio could be keyed?. In addition, the map attached to the report shows a BLM Engine 425. We have no Engine 425. Both the fire and the report should have known that this is BLM Engine 437 and it is based out of the Empire Ranch north of Sonoita. The summary section of the report is also confusing in that it states "This incident would not have occurred if the engine had performed properly" My question is which engine? BLM or USFS?

In addition, the entire tone of the report implies that BLM personnel and equipment are not up to standards and the USFS suffers for having to use them. I do not believe this to be true. In any event, had there really been a problem with the BLM engine crew on this fire the FMO here needed to know it immediately so he could take corrective action.

We have long enjoyed great cooperation with the USFS fire people here at Safford District and look forward to it continuing. In the future though, we would like to be involved in these types of events that involve BLM people. We take fire safety very seriously here and most especially fire shelter deployments.

If you have questions or need more information please contact Dave Hall, District Fire Management Officer at (602)428-4040.

William T. Civish

cc:  
Kirk Rowdabough, ASO  
J.M. Borens JR., CNF

United States  
Department of  
Agriculture

Forest  
Service

Coronado  
National Forest

300 W. Congress  
Tucson, AZ 85701  
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Reply to: 6730/5100

Date: June 16, 1994

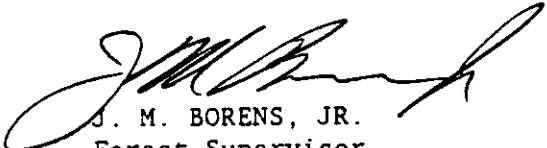
Subject: Fire Shelter Deployment on Reserve Fire

To: Regional Forester, R3

Attached is the Reserve Shelter Deployment Report completed by the Coronado National Forest Investigation Team. The Team members included, Lou Leibbrand, Coronado National Forest, Safety Officer and Roger Corner, Type I Safety Officer, Washington Office.

To clarify any confusion, the original name of this fire was Sawmill, which was later changed to Reserve. All attached documentation refers to the Sawmill Fire. This change was made to coincide with the name used by the Arizona State Land Department. The fire burned on land under Arizona State Land jurisdiction; however, the fire threatened National Forest land, approaching within a quarter mile of the Coronado boundary.

If you need to discuss this issue, or if you need additional information, please contact Edward Ayala at (602) 670-4528 or me at (602) 670-4537.



J. M. BORENS, JR.  
Forest Supervisor

cc:

John Kirkpatrick, R.O.

✓ Scott Hunt, AZS

## SHELTER DEPLOYMENT REPORT

6/14/94

### SITUATION

On 6/3/94 at about 1700, Coronado National Forest fire crews were responding to an arson-caused fire on the Nogales District. Fire location was T19S R15E center Sec 6, just north of Madera Canyon. Topography of the area is flat with vegetation type typical to desert floor, such as Pinion, Mesquite, Cacti, and low brush. At the time of the incident the fire was moving in a N.E. direction driven by a wind out of the S.W. This weather pattern had been constant during the entire suppression operation. Fire crews were working to black line an area ahead of the fire. At this point the fire was bordered by roads on all four sides and engines with crews were working from these roads.

### INCIDENT

While firing a black line in the N.E. quadrant, ahead of the advancing fire, the USFS engine broke down, a common occurrence with this 20 year-old engine. A BLM engine then took the lead. Forest Service crews immediately recognized that the BLM crew was moving too fast and were attempting to slow them down when the incident occurred.

A sudden wind change out of the S.E. ( instead of the prevailing S.W.) caused a second headwall to develop and advance in a S.W. direction (rather than the previous N.E. direction). The headwall advanced rapidly and momentarily trapped the crew working on the black line. Most of the crew were able to evacuate the area, either North or South of the advancing headwall. Three crew members were not able to escape and immediately deployed shelters, first as a shield in the upright position, then entering down on the ground as the heat intensified. The headwall split and moved around them on either side. Within 5 minutes the wind direction changed again and was out of the S.W. and the incident was over.

### FINDINGS

- \* The Safety Zone afforded by the black line was too narrow in the area where the BLM engine had taken over. This fact, coupled with the wind change, resulted in the need for shelter deployment.
- \* All USFS crew members were well trained and had all the protective gear required.
- \* Communications were excellent.
- \* Multiple agency response increases the complexity of suppression, because of the variety of equipment and experience level of firefighters.
- \* USFS manning is now at an estimated 70% level, requiring outside assistance.
- \* Training and experience level of outside forces varies greatly.

# Shelter Deployment Report

\* Equipment failures are a constant, recurring problem. Frustration levels of engine crews are high, because of their equipment failures.


\* Wind direction change was unpredictable.

## SUMMARY

This incident would not have occurred if the engine had performed properly.

USFS crews recognized the potential danger immediately and attempted to slow down the BLM crew, however, wind change occurred before this was accomplished and the resulting incident took place.

The USFS crews were properly trained, equipped, and supervised. The deployment was accomplished expeditiously and no injury resulted from the incident.

 6/16/94

LOU LEIBBRAND  
Forest Safety Officer

## Slump

- Belton Crew got out ahead - USFS trying to catch up - Not enough room for black ground to protect anyone - Only 5' of black line
- Spot fires jumped small black line and significant wind change occurred at that moment -
- Contributing factor was inexperienced and moved too fast to provide enough protection
- Shelters deployed shelters as shields first - then hit the ground as heat interfused
- Old Engine 3 pump on Joe's rig gave out - Joe stopped to fix Blot Engine then passed Joe's rig - but moved too fast
  - They were given directions on procedure to follow
  - 7 or 8 minutes elapsed from time engine passed to incident

- This engine will be replaced today and other one next week

- WCF Schedule - would not replace - was ready in '94  
20 year old engine - 74 engine  
10 year refurbishment

- 3551 > lots of on going problems  
3570 > WCF would not replace

- Tim Collins trying hard to get Done But R.O. holding up.

- Stopped At 10% - so problem few firefighters - poor

firefighters

- Some R.O. stuff

- work with limited people and resources

- lots of turnover / More with less with less experience.

- lots of frustration

- frustrated over personnel



- 2
- Shelters deployed - got in em  
They were OK - form needs  
to be filled out
  - Been trained in their use
  - Shelters protected - Shane feels  
Serious burns would have  
resulted
  - State & Volunteer Training Engines in good sh.
  - Raymond - 1<sup>st</sup> year 5<sup>th</sup> career at  
That moment, Shelter worked  
felt good.
- Factors
- ~~Extreme~~ fire conditions
  - experience of other crew
  - weather wind switch
  - Not enough people - Stress Starting To Sh.

Del Randall  
Joe ~~Hubbuck~~  
Pearl ~~Hafford~~  
Milt ~~Cur~~  
~~Leon Gordon~~  
Don ~~Morie~~  
Dennis ~~HAYBOD~~  
Shane Lyman  
Jim Kuhn  
Rene Martinez  
Raymond Yocupicio  
Carl Lombardo  
Roger Corner

IC - DET RANDALL  
INITIAL INVESTIGATOR - LOU LEBERAND  
CORONADO SAFETY OFFICER  
NWCG

6/3/94  
John J. Hill

## WILDLAND FIRE ENTRAPMENT/FATALITY INITIAL REPORT

Timely reporting of entrapments or fatalities is necessary for the rapid dissemination of accurate information to the fire management community. It will also allow fire safety and equipment specialists to quickly respond to these events as appropriate. This initial report does not replace agency reporting or investigative responsibilities, policies or procedures. Complete this report for fire-related entrapment and/or fatalities. Immediately notify the National Interagency Coordination Center (NICC) attn: Intelligence Section. Submit this written report to the address given below within 24 hours. Submit even if some data are missing.

NICC-National Interagency Fire Center  
3905 Vista Avenue  
Boise, Idaho 83705

Phone-(208) 389-2400  
FAX-(208) 389-2414

NICC Intelligence Section  
DG-A.INT: W02A  
IAMS- FCNICCOR

### I. General Information

- A. Fire name and location SAWMILL T19 R15 & SELL  
B. Number of personnel involved 9  
C. Number of injuries NO  
D. Number of fatalities NO

### II. Fire Related Information

- A. Fuel Model L-11 GRASSY OPEN MOUNTAIN  
B. Temperature 100+ R.H. LOW Wind 10 (mph) INITIAL DIRECTION S.W. SHIFTED TO S.E. - BURST LASTED 5 MIN.  
C. Topography FLAT Slope 4 %  
D. Fire size at time of incident/accident 100 Acres  
E. Urban/wildland intermix ☐ Yes ☒ No  
F. Cause of Fire ☐ Natural ☐ Incendary ☐ Accidental ☒ Unknown

### III. Entrapment

A situation where personnel are unexpectedly caught in a fire-behavior related, life threatening position where escape routes or safety zones are absent, inadequate or have been compromised. An entrapment may or may not include deployment of a fire shelter.

#### A. Entrapment information

1. Firefighter trapped ☒ with fire shelter ☐ without fire shelter  
2. Burns/smoke injuries incurred while in fire shelter ☐ Yes ☒ No  
3. Burns/smoke injuries incurred while escaping entrapment ☐ Yes ☒ No  
4. Burns/smoke injuries incurred while fighting fire ☐ Yes ☒ No  
5. Fire shelter performed satisfactorily ☒ Yes ☐ No  
6. Fire shelter was available, but not used ☒ Yes ☐ No

SOME

B. Personal Protective Equipment Used

1. Fire Shelter

☒

Yes

☒

No

2. Protective Pants

☒

Yes

☐

No

3. Gloves

☒

Yes

☐

No

4. Face/Neck Protection

☐

Yes

☐

No

5. Protective Shirt

☒

Yes

☐

No

6. Hardhat

☒

Yes

☐

No

7. Boots

☒

Yes

☐

No

8. Goggles

☒

Yes

☐

No

IV. Fatalities

A. Type of accident

☐

1. Aircraft

☐

2. Natural (lightning, drowning, etc.)

☐

3. Medical (heart, stroke, heat, etc.)

☐

4. Struck by Falling Object

☐

5. Vehicle

☐

6. Smoke

☐

7. Entrapment

☐

8. Other

B. Where fatality(s) occurred

☐

1. Fire site

☐

2. Incident Base

☐

3. In transit

☐

4. Other

C. Fatalities

1. Name \_\_\_\_\_

D.O.B. \_\_\_\_\_

Employment status

☐

Career

☐

Seasonal

☐

Casual

☐

Other

2. Name \_\_\_\_\_

D.O.B. \_\_\_\_\_

Employment status

☐

Career

☐

Seasonal

☐

Casual

☐

Other

3. Name \_\_\_\_\_

D.O.B. \_\_\_\_\_

Employment status

☐

Career

☐

Seasonal

☐

Casual

☐

Other

4. Name \_\_\_\_\_

D.O.B. \_\_\_\_\_

Employment status

☐

Career

☐

Seasonal

☐

Casual

☐

Other

Note: In the event of a fatality, do not release name(s) until next of kin is notified.

D. Employing agency \_\_\_\_\_

E. Unit name and address \_\_\_\_\_

F. Firefighting part of employee's job description

☐

Yes

☒

No

G. Person to contact for additional information \_\_\_\_\_

Phone \_\_\_\_\_

Home unit address \_\_\_\_\_

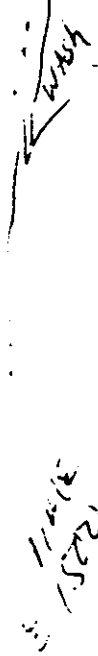
H. Brief description of accident \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6/3/84



- North ←
- NO SHELTER USE / ALL USED IN URBAN.
  - MORE AS DEFLECTION METHOD
  - MORE RESOURCES EARLIER WOULD HAVE FIRED OUT FROM BOMBING - POSITIVE IMPACT ON CIVILIAN

- DURING BURST of WIND
- EXPERIENCE LEVEL OF CROWS VARIES  
BLM  
STATE  
LOCAL  
USFS

+ FACTOR

- SUPERB RADIO COMMUNICATIONS

Don L. Noble

Delmar Hanks  
I.C.