

Hazard Abatement Plan - Thirtymile Fire

Enclosure # 5

Entrapment Avoidance Training Brief

By Jim Cook 13Mar2002

The U.S. Forest Service Wildland Fire Safety Office is currently sponsoring the development of a training product with the working title of *Entrapment Avoidance*. The intent of this training product is two-fold: 1) to examine the decision processes for engagement/disengagement on the fireground; 2) to examine factors that determine effectiveness of escape routes and safety zones. The target audience is first-line fireground decision makers such as Single Resource Boss, Task Force Leader, or Incident Commander Type 3/4/5 (see Attachment 1 for the specific training objectives). This product is designed to be a 2-3 hour lesson that can be used to enhance existing S courses or as another tool for instructors responsible for presenting the Annual Fireline Refresher Training. This training product does not address last resort survival actions after firefighters become entrapped. That information is presented in the *Your Fire Shelter* family of materials developed at MTDC.

This package will be issued by this office and distributed through the National Wildland Fire Safety Council representative for every region. The entire lesson will be packaged in a PowerPoint presentation and a companion student workbook. The actual package as issued would contain a CD-ROM with all instructor support and a single master student workbook. Packaging in this manner would allow for most rapid distribution. This would require that local units do the duplication of the student workbook. It is anticipated that the workbook will be short enough that this should not be a significant logistical barrier. Target date to have this product ready for distribution is mid-April.

The development workgroup began the project in the June of 2000 (see Attachment 2 for workgroup roster). Representatives from the development workgroup met with Leslie Anderson in June of 2000 and George Jackson in November of 2001 to brief them on the project. The development workgroup also coordinated with the NWCG S-130 course revision effort that is currently underway. A number of entrapment avoidance training objectives for the basic firefighter will be incorporated into the new S-130 course as a result of that collaboration (see Attachment 1). Additionally, making a link between this product and the planned MTDC entrapment avoidance video is achievable (see Attachment 1). This is the video project proposed by Dr. Jon Driessen where experienced firefighters are interviewed in order to develop an "oral tradition" on how they have kept their crews safe on the fireline.

EA BRIEF - ATTACHMENT 1

Entrapment Avoidance Training Objectives:

Goal:

**To model behaviors and provide decision tools that can assist firefighters in avoiding fire entrapment situations (refer to TriData Phase III Goal #34).
Revise fire shelter training to emphasize entrapment avoidance (refer to Thirtymile Action Plan #A-29).**

Basic Firefighter Objectives (integrated into S-130):

1. Describe how LCES is related to the Fire Orders.
2. Define safety zone, entrapment, and deployment area.
3. Define escape route and escape time.
4. Identify travel barriers that will affect escape time.
5. Identify the 3 types of safety zones and describe examples of each.
(The burn, Natural features, Constructed sites)
6. Describe the rule of thumb for distance separation to avoid radiant heat injury.
7. Recognize heat impact factors that will affect the rule of thumb for distance separation to avoid heat injury.
8. Recognize that firefighters have a right to know the location of their escape routes and safety zones at all times.
9. Recognize that firefighters have a right to ask for clarification when faced with unclear instructions or they are unsure about potential hazards.

Supervisory Firefighter Objectives:

1. Describe the role that LCES has in the Risk Management Process.
2. Describe a protocol for negotiating a perceived unsafe assignment.
3. Define trigger point and levels of engagement.
4. Given a set of fireline conditions, identify valid trigger point(s).
5. Describe a procedure for recognizing escape routes and safety zones when engaging a fire.
6. Given a set fireline conditions, estimate minimum safety zone size using the Missoula Fire Lab model.
7. Identify human factors that contribute to fireline decision errors.
8. Given a fire scenario, determine the appropriate level of engagement as conditions change.

Linking Objective (for MTDC/Driessen Oral Tradition video project):

1. Recognize successful attitudes and strategies for avoiding fire entrapment situations that have been used in the past by experienced fireline personnel.

EA BRIEF - ATTACHMENT 2

Entrapment Avoidance Workgroup Roster

Primary Development Group

Dr. Bret Butler	Missoula Fire Lab
Jim Cook (Project Leader)	USFS / NIFC
Mark Linane	Ventura County Fire Department
Ted Mason	BLM / NIFC

Contributing Subject Matter Experts

Marshal Brown	Entiat IHC
Chad Fisher	NPS / NIFC
Ron Napoles	Kern Valley IHC
Fred Schoeffler	Payson IHC
Jim Steele	BIA-USFS
Thom Taylor	Okanogan-Wenatchee NF
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Patrick Withen	McCall Smokejumpers