

# This month's *Working Fire...*

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**Volume 99-12: December 1999**  
**Approx. Program Length: 53:31**

## **FIRELINE**

### **Urban/Wildland Fire San Diego County, CA**

**Approx. length: 3:05**

California Department of Forestry Crews joined with local departments to fight this wildland blaze which threatened home outside of San Diego. Mutual aid assistance was an important part of this response as were aerial tanker drops. Over fifty homes were saved. For more information, contact Working Fire at 800-516-3473.

### **Hay Bale Fire Avondale, PA**

**Approx. length: 9:05**

Over this past summer and fall, hay used in the production of mushrooms in this Pennsylvania county has caught fire many times due to dry conditions. At this incident firefighters attacked and protected exposures but finally had to go defensive and let it burn. Recycled sewage “gray” water was used along with extensive water tanker shuttling. Issues relating to volunteer departments are discussed. For more information contact Chief Glen Hallman, Avondale Fire Company, P.O. Box 492, Avondale, PA 19311 or call him at 610-268-2486.

### **Response Vehicle Accident Mt. Laurel, NJ**

**Approx. length: 10:40**

An aerial truck responding to an incident overturned on two autos at an intersection, trapping one occupant while the others escaped. Cranes, air bags, and cribbing stabilized the overturned rig while the trapped car was winched clear so rescue crews could begin extrication. The occupant had relatively minor injuries; one responder on the toppled rig received a broken wrist. The driver was severely disciplined. Mutual aid, Critical Incident Stress Management, and driver safety were all a part of this incident. For more information, contact Chief William Dukes, Sr., Mt. Laurel Fire Department, 75 Elbow Lane, Mt. Laurel, NJ 08054 or call him at 856-234-6053.

## **HANDS-ON**

### **Ventilation Basics, Part III**

**Approx. length: 7:24**

This is the third of a multi-part series on ventilation basics. This month we visit different residential and business structures to examine their construction and various features which might be used as part of a ventilation scenario. For more information, contact Captain Robert Czerwinski, Head of Training, Pittsfield Fire Department, Main Fire Station, 74 Columbus Avenue, Pittsfield, MA 01201 or call him at 413-448-9255.

## **This month's *Working Fire*...**

### **HANDS-ON (cont.)**

#### **Firefighter Arson Part I**

**Approx. length: 8:50**

In the first of four segments, the taboo subject of firefighter arson is examined by three fire marshals, one of whom is a psychologist specializing in this area. This month, the statistics and an actual case of firefighter arson are discussed as well as the psychological factors and traits which motivate this behavior. For more information, contact Working Fire at 800-516-3473.

### **FIRE MEDICS**

#### **Vehicle Safety & Maintenance Check Part I**

**Approx. length: 6:46**

As we get ready for a new year (and a new millennium!), it's smart to check over the vehicles which serve us every day. We begin a useful series on checking EMS vehicles for safety and maintenance; this month, we check under the hood. In successive months we examine both Basic and Advanced Life Support units. For more information, contact Captain Raymond Davis, EMS Coordinator, City of Troy Fire Department, 2175 6th Avenue, Troy, N.Y. 12180 or call him at 518-270-4471.

### **EVOLUTIONS 2000**

#### **Kramer vs. Kramer Firefighter Arson**

**Approx. length: 2:08**

*Working Fire* and Professor/Chief Bill Kramer present our Continuing Education segment that's worth one credit from the University of Cincinnati. Following up on this month's *Hands-On* segment on Firefighter Arson, Bill discusses the issue and asks questions about screening and investigation. For more information, contact Professor Bill Kramer at the Open Learning Fire Service Program, College of Applied Science, 2220 Victory Parkway, ML #103, Cincinnati, Ohio 45206 or call 513-556-6583.

## **This month's *Working Fire*...**

### ***From the Departments Involved...***

#### **DISCUSSION QUESTIONS FOR THIS MONTH'S INCIDENTS**

The departments involved in this month's incidents pose some discussion questions that you can use as discussion-starters in your own department's training sessions. Let's kick it around!

#### ***Urban/Wildland Fire/San Diego County, CA Fire Captain James Rodman/California Department of Forestry***

1. Does your jurisdiction have a substantial amount of brush interfacing with built-up, developed areas? Does your department understand the danger for fire spread when the wildland interface is close by civilian structures?
2. Do you have the personnel (other stations, mutual aid) to take on a wildland fire, often on a number of fronts? Are you familiar with the firefighting techniques necessary to handle such incidents?

#### ***Hay Bale Fire/Avondale, PA Chief Glen Hallman/Avondale Vol. Fire Company***

1. Like the San Diego County Fire, hay bale fires are extremely similar to wildland fires in the amount of potential fire load and spreadability, yet they have collapse zones like a structure fire. Think about the parallels to other fires you have fought and how you would apply those techniques to hay fires.
2. Do you have sufficient water resources to handle a fire of this magnitude given that such fires often occur in areas with poor water supplies? What would be your strategy to deliver sufficient water? Do you have access to "gray" water?

#### ***Response Vehicle Accident/Laurel Hill, NJ Chief William D. Dukes, Sr./Mt. Laurel Fire Department***

1. Can your dispatching operation redirect crews to new areas of need while maintaining coverage of the original response? Mutual aid will usually play a role in this ability to respond.
2. Do you have policies on how to drive to incidents safely (stop on red, etc.) and do you conduct driver training? Have you ever simulated such a response vehicle accident?

# Enhanced Training

## Ventilation Basics, Pt. III

### Objectives

After watching this program, the student shall:

1. be made aware of typical structures he/she may encounter and the natural openings these structures contain
2. be made aware of the need for safety while working on roofs.

### Standards & Regulations

This training is consistent with NFPA 1500 and all relevant OSHA regulations.

### Training Outline

#### A. SINGLE-STORY STRUCTURE, PITCHED ROOF

1. Retains heat, smoke, and hot gases in the attic at the top of the pitch.
2. May already have vents in gables which can relieve these conditions.
3. Roof Construction:
  - a. Plywood decking or planking with shingles on top.
  - b. Sometimes there may be slate on top. Slate is harder to open up for ventilation.
4. In an actual room-and-contents fire at such a structure, horizontal ventilation may be sufficient. If the fire gets into the attic, natural openings would include:
  - a. roof vents in gables mentioned above
  - b. roof dormer windows.

Opening up the roof would be another option but our last resort.

#### B. DUPLEX, HIP ROOF

1. The roof slopes down from the top in all directions.
2. It's often slate-covered with one-inch decking underneath.
  - a. Such roofs are difficult to ventilate.

Answers to the questions on Page 6:

1. False
2. False
3. True
4. c.
5. e.

## Ventilation Basics, Pt. III

- b. Hand tools used for ventilation may include the halligan bar or flathead ax to break up the slate before creating the ventilation hole.
  - c. **SAFETY POINT!** Warn others below of falling slate!
3. The roof dormer is also a ventilation option.
- a. Beware of a finished attic (apartment, etc.). You may think you're ventilating into attic space and it's still just living space.

### C. HIGH-RISE STRUCTURES

1. You may have to use a variety of ventilation techniques in these structures:
  - a. Vertical
  - b. Horizontal
  - c. Positive-pressure ventilation may work best because of multiple roofs and levels and multiple compartments inside which can be vented to the roof.
2. Natural Openings Available
  - a. Stairways
    - i) Try to pick one not being used for rescue or evacuation.
  - b. Smoke Ventilators
    - i) Designed to work with the building's fire alarm detection system.
    - ii) Automatically tripped by an electronic alarm or smoke alarm sensor.
    - iii) There will be a manual release to open the ventilator in the stairwell behind it in case it doesn't open automatically.
  - c. Ventilation Shafts
    - i) They can be used with positive-pressure ventilation from lower floors if the correct shaft can be matched with the area on fire below.
  - d. Skylights
    - i) It's cheaper and easier to break the glass than cut a hole in the roof.
3. **SAFETY POINT!** Be sure you're tied off and/or harnessed, especially if there is no guardrail, fence, or parapet.

### D. PITCHED ROOF VARIATION ON MULTIPLE-FAMILY STRUCTURES

1. Natural openings such as skylights may be provided.

## Ventilation Basics, Pt. III: Quiz

Date \_\_\_\_\_

Chief/T.O. \_\_\_\_\_

Firefighter (print) \_\_\_\_\_

Education Credits/  
Hours/Units \_\_\_\_\_

Signature \_\_\_\_\_

### Select the best answer:

1. True or False: Hot gases and smoke may tend to drift to lower floors from upper floors.
2. True or False: Slate roofs give greater protection to firefighters.
3. True or False: We try to take advantage of natural openings before creating our own.
4. In duplexes with a hip roof, which can't be used as a natural opening?
  - a. Upper window
  - b. Dormer
  - c. Gable
  - d. None of the above
5. In high-rise structures, which of the following are possible natural openings?
  - a. Stairways
  - b. Smoke ventilators
  - c. Ventilation shafts
  - d. Skylights
  - e. All of the above.

*(See answers at the top of page 5)*

# Enhanced Training

## Firefighter Arson. Pt. I

### Objectives

After watching this program, the student shall:

1. become aware of the evidence which might lead to a firefighter arsonist.
2. understand the patterns of behavior and possible motivations.

### Standards & Regulations

This training is consistent with NFPA 1500 and appropriate OSHA regulations.

### Training Outline

#### A. STATISTICS

1. In Camden County, New Jersey last year, approximately 400 fires were investigated, forty percent of which were found to be arson. A number of those were committed by firefighters.
2. Statistics on false alarms will not reveal that many of those are also committed by firefighters.

#### B. EVIDENCE AND TIP-OFFS

Evidence and tip-offs that firefighters may be involved in arson fires include the following:

1. Aggressive behavior.
2. Talking about it with peers.
3. Trying to bring peers into the activity.
4. The suspect may leave the fire station just prior to a fire call or arrive just as a call comes in.
5. Examination of response cards to see who is on the first piece of equipment leaving the station.

Answers to the questions on Page 9:

1. False 2. True 3. False
4. d. 5. b.

## Tire Fire Extinguishment

6. Physical evidence such as road flares being removed from the fire station and then used to start the fire.
7. Police officers may call in suspicious vehicles in areas of arson fires just prior to the fire calls. These reports can be investigated.

### C. PSYCHOLOGICAL BEHAVIORS AND PATTERNS

1. Arsonists usually are creatures of habit and do things the same way each time; for example:
  - a. Using the same ignition source.
  - b. Using an accelerant.
2. Sometimes, constantly repeated behavior at the arson site can be tracked later. (An example given was the removal of copper pipes from an arson location which were resold later.)
3. Check the time patterns and availability of suspects against the occurrence of arson fires. With volunteers, they often occur on drill nights or on the night preceding or the night following a drill night or meeting.
4. Map the proximity of arson fires to a suspect's home or work (in the case of a volunteer). Arson fires are often set in areas of familiarity to the arsonist, such as his district. In this way, he can respond to the fire.
5. A recently reprimanded, disciplined, or dismissed firefighter might be an obvious suspect. The motive may often dictate the method.
6. Arsonists often start small and then move to larger fires as they become more comfortable in the behavior and begin to draw greater levels of fulfillment from ever-larger fires.

### D. PREVENTATIVE MEASURE

1. If a firefighter is suspected in an arson fire or a series of fires, while the investigation is continuing, the fire department might want to consider changing the locks and combinations to equipment and the fire station premises themselves.

## Firefighter Arson, Pt. I: Quiz

Date \_\_\_\_\_

Chief/T.O. \_\_\_\_\_

Firefighter (print) \_\_\_\_\_

Education Credits/  
Hours/Units \_\_\_\_\_

Signature \_\_\_\_\_

### Select the best answer:

1. True or False      Firefighter arsonists always act aggressively in their firefighting.
2. True or False      Observing the comings and goings of firefighters as related to the timing of fires is a good way to investigate the problem.
3. True or False      Stolen road flares are always an indicator that an arson fire is about to happen.
  
4. Which of the following is not a tip-off to firefighter arson?
  - a. Bragging about setting fires
  - b. Response cards indicate the same firefighter is always on a first-out vehicle.
  - c. A firefighter gets dismissed and a fire of suspicious origin occurs.
  - d. A firefighter eats "three-alarm" chili and a fire of suspicious origin occurs.
  - e. All of the above.
  
5. One of the following patterns or behaviors is a possible indicator for firefighter arson:
  - a. It rains the night before a fire of suspicious origin occurs.
  - b. A correlation exists between a firefighter's residence and the location of a rash of fires.
  - c. When a fire truck returns from a suspicious fire, it's low on fuel.
  - d. Deck guns won't shoot straight.
  - e. Three of the above.

*(See answers at the top of page 8)*

# **Evolutions 2000**

## **University of Cincinnati Continuing Education Program**

### **Ventilation Pros and Cons**

If you're enrolled in the **Open Learning Fire Service Program** at the **University of Cincinnati**, here's your opportunity this month to earn one college credit hour for watching *Working Fire*.

#### **VOLUME 99-12**

#### **Firefighter Arson**

**Complete written responses to the following three essay questions:**

1. Do you feel that a firefighter arsonist is understandable and explainable? Why or why not?
2. What screening or testing of potential firefighters would you recommend to minimize the chance of accepting an arson-prone recruit?
3. Briefly, how would you conduct an arson investigation in which a fire department member is a suspect?

**Send your responses to:**

**Mr. Bill Kramer  
University of Cincinnati  
College of Applied Science  
2220 Victory Parkway, ML #103  
Cincinnati, OH 45206**

#### **ENROLLMENT INFORMATION:**

For more information on enrolling in the Open Learning program to gain college credit, call *Working Fire* at 800-516-3473 for a brochure or, to register directly, call the University of Cincinnati at 513-556-6583. Associates and Bachelors programs are available. Call to have your transcripts evaluated.