

This month's *Working Fire*...

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Volume 03- 7: July 2003
Approx. Program Length: 57:10

FIRELINE

Crane Industrial Incident Vineland, NJ

Approx. length: 4:41

A crane operator had a demolition site was trapped in his cab when an I-beam of the structure he was working on swung down and trapped him by pinning his hand against a wall of the cab. Responders did appropriate cribbing to secure the I-beam and then decided to cut four bolts which finally released the I-Beam from its position. The operator was conscious and was in some pain throughout the extrication. For more information, contact Firefighters Daniel Durand or Anthony Baldosaro, City of Vineland Fire Department, 4th & Wood Street, Vineland, NJ 08360 or contact them at 856-691-2480.

Lexington Green Apartment Fire Christiana, DE

Approx. length: 9:04

An arson fire at a Section 8 apartment complex brought out responders in the early morning. This complex had a history of fires such as this. By protocol, all windows were laddered as search & rescue was performed. A water supply problem plagued the early part of the incident until a later-arriving unit took a position at another hydrant much further away. Many residents jumped from upper floors resulting in a number of broken bones. 800 mhz radio communication difficulties were also a problem. For more information, contact Deputy Chief Larry Duhadaway, Christiana Fire Company, P.O. Box 189, Bare, DE 19701 or call him at 302-737-2433.

HANDS-ON (Expanded Training)

WMD/Illegal Substance Lab Awareness Part I

Approx. length: 24:45

In the first of a two-part series, *Working Fire* presents two months of expanded training on awareness of illegal labs which might produce a variety of controlled substances and weapons of mass destruction that responders might encounter on a routine fire call. This series involves four simulated labs with detailed descriptions of what responders should watch for and be aware of should they encounter similar suspicious situations. This month we cover labs that might produce a "dirty bomb" and a nerve agent. For more information, contact Assistant Chief Rob Wiley, Central County Fire & Rescue, 1 Timberbrook Drive, St. Peters, MO 63376 or call him at 636-970-9700.

This month's *Working Fire*...

FIRE MEDICS

Tactical Fire Medics

Approx. length: 11:19

This month, we catch up on the latest thinking on the deployment of a tactical fire medic — a paramedic who accompanies police tactical response units —and how one department handles this function. Even if your department doesn't ever joint-respond with police, this is important information to know should a fire squad ever find itself in a combative situation. If your department has never planned for the possibility, this segment will give you a position to work from. For more information, contact Assistant Chief Rob Wiley, Central County Fire & Rescue, 1 Timberbrook Drive, St. Peters, MO 63376 or call him at 636-970-9700.

EVOLUTIONS 2000

Kramer vs. Kramer Medical Unit Comparison Debate

Approx. length: 3:02

Working Fire and Professor/Chief Bill Kramer present our Continuing Education segment that's worth one credit from the University of Cincinnati. This month, Bill debates the use of protocols, SOPs and SOGs and when one should develop into another. For more information on how to get your Fire Science degree through the University of Cincinnati, contact Professor Bill Kramer at the Open Learning Fire Service Program, College of Applied Science, University of Cincinnati, 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!

Crane Industrial Incident/Vineland, NJ

Firefighters Daniel Durand and Anthony Baldosaro/City of Vineland (NJ) Fire Dept.

1. Our slice pack was out of service when this called came in. We had a backup plan. What would you have done? Do you have a list of contractors you can call for assistance should a piece of equipment fail?
2. If you arrive at a fire where residents are panicking and jumping from upper floors, call immediately for extra EMS units for transporting non-ambulatory patients.
3. Where possible, administer EMS treatment during the extrication. There may be times when this is not possible, but do what you can do extend the "Golden Hour."

Lexington Green Apartments/Christiana, DE

Deputy Chief Larry Duhadaway/Christiana (DE) Fire Company

1. Should you encounter a bad hydrant or one that provides insufficient water, plan for hooking into a different hydrant with the next arriving apparatus. In this case, the need to start search & rescue prevented the first-in unit to this fire to seek alternative water sources.
2. Regrettably, Section 8 housing can provide dangerous situations such as arson fires and combative zones into which fire departments must respond. Preplan these areas well with an eye toward protecting personnel and by working with local police on safety outreach programs ("Don't Smoke in Bed" and "Turn in a Narc," for example) which will promote safer environments for responders from any agency.

Expanded Training

WMD/Illegal Substance Lab Awareness, Part I

Objectives

After watching this segment, the student shall understand:

1. the components which one might find in such an illegal lab
2. how seemingly innocent situations can present grave danger.

Standards & Regulations

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

Training Outline

I. Awareness of “Dirty Bomb” Lab

A. Purpose

To step outside our normal firefighting mode and mindset and begin to look at our surroundings differently, even with some skepticism. Look for clues, things that are out of place, that don't add up. In an environment of possible WMD or controlled substances, be suspicious of and question everything you see.

B. Scenario Explanation

1. First alarm, first-in assignment. Dispatch to local mall for a reported natural gas explosion in the mall..
2. The questions is, what will the fire crew do, based on what they find inside?

C. On Scene

1. No fire showing, dust in the air.
2. Air monitor is showing no explosive limits; all reading zero.
3. Gas meter is not spinning; gas is shut off, presumably.

Based on what's visible on-scene, crew decides to back out and isolate the area.

D. Scene Examination

1. A radioactive label is found, along with a battery, a pipe cap, a backpack presumed to be a secondary device, and a body. Also a purse was found which could be a secondary device.

WMD/Illegal Substance Lab Awareness, Part I

E. Dirty Bomb/Radiological Device

1. It's a radioactive source surrounding some sort of explosive device which goes off, dispersing the radioactive source. Different than a normal bomb in that they don't look to hurt people immediately but are used psychologically to create fear and terror over the long haul plus cause financial hardships by crippling societal operations.
2. With a dirty bomb or radiological device, you can find dispersal limits via metering. This will allow you to lay out hot and warm zones.
3. At this point, Bomb & Arson would take control of the scene and do their investigation.
4. Be watchful for other suspicious articles or occurrences or things that seem out of place.

F. Scene Analysis

1. Secondary devices: anything from a suitcase size on down could be a secondary device. Give it a 1,000-foot radius for a safety zone.
2. Don't use radios or walkie-talkies within a 100-foot radius of the device. With truck radios, give a 200-foot radius. But many departments use the 1,000-foot radius as an SOP. It's a good idea to shut off your radio so you won't be tempted to use it.
3. Stay away from dumpsters, heavy vegetated areas, or cars in the parking lot in case another device has been set up to take out first responders.
4. If you are exposed to the radiological device, a quick decon is easily arranged.
5. However, the biggest problem is inhalation. Once you take the radioactivity into your lungs, it can't be taken out. You can't decon your lungs.
6. Different radioactive isotopes target different organs in the body. Depending on the dosage or how hot the source is, you might die fairly quickly or years later. Therefore, ALWAYS PROTECT YOUR RESPIRATORY TRACT!
7. Beware of seemingly routine auto accidents around secure facilities such as aircraft plants or financial institutions. It may be a diversion or the actual dispersal method of a dirty bomb.

G. Equipment/Product found

1. Fuse igniter: Sometimes green or dark in color. Pull the safety pin back, pull the pin back, and it fires a spark, igniting an explosive train.
2. Safety fuse - burns a foot every 45 seconds. If you see a flame or sparking externally, remember that the fuse burns internally about 6-12" ahead of what you're seeing externally.
3. Detcord - looks similar but is considered an explosive itself. Often used in demolition work to blow things apart. Usually white in color. Sometimes its colored black to confuse people. If you find it lying around, something's up!

WMD/Illegal Substance Lab Awareness, Part I

II. Awareness of Nerve Agent Lab

A. Purpose

To step outside our normal firefighting mode and mindset and begin to look at our surroundings differently, even with some skepticism. Look for clues, things that are out of place, that don't add up. In an environment of possible WMD or controlled substances, be suspicious of and question everything you see.

B. Scenario Explanation

1. Simulating an EMS call with difficulty breathing. A man in the house heard a thump in the basement, found his roommate on the ground, not sure if he's breathing.
2. The EMS crew encounters the man who reported the call leaving the house.
3. The question is, what will the EMS crew do, based on what they find inside?

C. On Scene

1. Crew encounters complainant. He gives a lame excuse and then has to leave abruptly.
2. This is suspicious in that usually witnesses want to stay around and give all the information they can. This guy wants to run; this is a red flag.
3. Based on this, the EMS crew opts not to proceed; even if it were a suicide call, they wouldn't go in until the scene is secure.

D. Scene Examination

1. Man down wearing breathing mask and SCBA
2. Pressurized sprayer lying next to him.
3. Pesticides sitting on countertop with some kind of manual.

F. Scene Analysis

1. Man with Tyvek mask and air tank; if he's unconscious and wearing protective clothing, that could be an issue. But he could be an exterminator who had a heart attack.
2. But then we see all the other stuff: the sprayer, pesticides, manual -- and a GRENADE! That's the deal-breaker. Evacuate immediately! Let DOD and/or Haz-Mat handle it.
3. If you find any kind of an explosive device that you think might hurt you, get out!

G. Equipment/Product found

1. Apparently this guy was trying to cook up a nerve agent.
2. Nerve agents in general — VX, Soman, Tabun, Sarin —all come under the

Answers to the questions on Page 8:

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

WMD/Illegal Substance Lab Awareness, Part I

general heading of Organophosphates. They work by interrupting the synapses of the nerves by interfering with neurotransmitters. The results are spasms and lack of control of muscle function. They cause SLUDGE: salivation, lacrimation, urination, defecation, gastroenteritis, and emesis.

3. It's nearly impossible to make an organophosphate in your basement.
 - a. High-grade Sarin is difficult to produce. It's a nonpersistent liquid and evaporates almost instantly into the air making it easy to ingest.
 - b. VX, on the other hand, has the consistency of motor oil. Very thick and it will stay around for a long time.
 - c. Weaponized versions of these chemicals have no odor or taste and are extremely lethal. Most of the cheaper grades of these that home chemists make will have odor and taste. Consequently, civilians may ingest it and know it from the smell or taste but may only get sick unless close contact is made.
3. Malathion: commercially available in small doses, but it's an organophosphate which could be used to make someone sick.
4. Hand sprayer and grenade may have been dispersal devices.

G. Next Decisions and Actions

1. We agree at this point that the scene should be evacuated, but what else do we do?
2. Do we secure and evacuate the building if there are other occupants?
3. Do we rescue the chemist? That's something the company officer will have to decide. With your turnout gear, SCBA, and knowledge of the routes of entry for nerve agents on your body, you might be able to rescue him, if you know what you're doing. And that's if the grenade doesn't go off. But minus the grenade, you might be able to grab the guy; however there are other unknowns like the beakers on the table.
4. However, you might view the chemist as a suicide; he made a conscious choice to kill himself and therefore isn't worthy of us risking ourselves and our men to pull him out — especially since it may be a body retrieval anyway.
5. If there were other innocents involved, such as police or a child, a rescue might be undertaken if you think the risks to inhalation are minimized by your gear. But it would be a quick "in" and an "out."
6. If you do the rescue, be ready to do an emergency decon afterward. In an emergency decon, you want to wet down your gear so the agent won't aerosolize, remove your gear, then flush it with plenty of water. You can remove 80% of the agent by this procedure.

WMD/Illegal Substance Lab Awareness, Part I: Quiz

Date _____

Chief/T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False A bottle of Malathion and a bug sprayer definitely means someone is trying to make a nerve agent.
2. True or False Keep monitoring gear handy at all times when answering a suspicious call.
3. True or False There are many issues as to whether responders should consider jeopardizing their own safety and lives in conducting rescues or giving treatment in such scenarios.
4. Which of the following items might need closer scrutiny on a response scene?
 - a. a mousetrap
 - b. a mousetrap attached to a cord
 - c. a manual on bomb building
 - d. a manual on bomb building with a box of shotgun shells
 - e. Two of the above
 - f. All of the above
5. Which grouping is not correct?
 - a. pipe cap — radioactive warning label — backpack — battery
 - b. Fuse Igniter — Detcord — Safety Fuse — Grenade
 - c. Sarin— VX— Soman — Tabun— Malathion
 - d. 1,000-foot radius — turn off radios — emergency decon — SLUDGE
 - e. None of the above

(See answers at the top of page 7)

Evolutions 2000

University of Cincinnati Continuing Education Program

Protocols vs. SOPs vs. SOGs

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 03-7

Kramer vs. Kramer: Protocols vs. SOPs vs. SOGs

Complete written responses to the following three essay questions:

1. List the advantages and disadvantages of documenting key tactical fireground procedures as protocol or "Standard Operating Procedures" (SOPs).
2. List the advantages and disadvantages of loosely documenting key tactical fireground procedures or "Standard Operating Guidelines" (SOGs).
3. Explain the terminology for procedures used in your organization, describing any suggested changes.

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.