INSTRUCTOR GUIDE

**Topic:** Arson Detection for the First Responder – Scene Security and Preservation of Evidence

**Level:** Cognitive

**Time required:** 2 hours

**Materials needed:**
- Note taking guide
- Power Point Projector and Screen

**Reference:**

**Motivation:**
Arson is one of the toughest crimes to prove. The activities of a first responder doing fire suppression and overhaul activates could play a critical role in the outcome of an investigation. That is why it is so very important for them to familiarize themselves with the need for scene security and preservation of and handling of evidence.

**Objective:**
The student will be able to describe the proper procedures for securing the fire scene, along with describing the appropriate procedure for allowing the owner, occupant, or building representative to enter the fire scene, explain the importance of evidence preservation at the fire scene, along with identify proper evidence collection techniques.

**Overview:**

I. Restricting Entry into the Fire Scene
II. Release of the Fire Scene
III. Evidence Preservation

### I. Restricting Entry into the Fire Scene

A. Post suppression reasons to enter scene.
   1. Owner’s, occupants, building representatives, or others with an Interest in the fire scene may need to enter.
2. They may want to determine the extent of the fire damage to the scene.

3. They want to retrieve personal items.
   a. Jewelry or other valuables.
   b. Medications, glasses, false teeth and prosthetic limb.
   c. Insurance documents.
   d. Items that may help children feel secure.
      ▪ Favorite book or toy
      ▪ Favorite blanket or stuff animal
   e. Clothing.

4. Examine fire scene for appliances left on.

INSTRUCTOR NOTE
Remind students that fire victims may be asking themselves of they did something to cause the fire. They wonder if they may have left an appliance on, such as a stove, iron, curling iron, soldering gun, etc.

Ask student for other examples from their own experiences.

It is necessary to restrict entry until the scene can be released by the fire department or the arson investigator.

1. The first responder has a responsibility to determine, or have someone determine, the cause of the fire.

INSTRUCTOR NOTE
Remind students to follow their own department’s policies and procedures when it comes to who is responsible for determining the cause of the fire.

If a fire investigator has been requested, no unauthorized persons should be allowed entry into the fire scene under any circumstances.

3. Restrict entry to everyone except those who need to be present.
4. Suggested methods of preventing unauthorized access may include

   a. Place barrier tape or rope around the perimeter of the fire scene.
   
   b. Secure access and egress areas if possible.
   
   c. Post a guard at each door to restrict entry.
   
   d. If firefighters are at the scene to assist the fire investigator, keep them on standby at a staging area until needed.

      - For lifting, shoveling, etc.
      - To provide lighting for the fire scene.

5. Procedures for allowing authorized entry.

   a. Verify that the person(s) has a right to access the building or fire scene.

      - Unauthorized persons have been known to enter a structure or the fire scene for the purpose of looting.

   b. Establish their reason for entry.

   c. Inform them that crews or investigators are still working in the building or on the fire scene.
d. After you have approved them for entry, inform them that they will be escorted for their own safety.

e. Record the name and time of each person who enters or leaves the fire scene.

f. If property is removed by persons, make a detailed record of the items removed, and by whom.

g. Show respect and compassion for victims.

h. Assist them as much as possible to find what they need.

6. Instructions for those who enter prior to the start of the investigation.

   a. Do not tamper with items that may become evidence.

   b. Do not move controls or change the position of switches, etc.

   c. Do not remove items that may be critical to the fire scene investigation.

II. **Release of the Fire Scene**

   A. Accidental fires.

      1. You may release the fire scene to the owner or occupant once the origin and cause of the investigation has been determined.

      2. Escort the owner and/or occupant through the fire scene.
3. Explain the safety considerations relative to the stability of the building.

4. Explain the extent of the fire damage.

5. Explain the fire suppression efforts used to control the fire.
   a. Ventilation holes in roof.
   b. Broken windows
   c. Forced entry
   d. Holes cut into floors, ceilings, walls

6. Explain the findings of the investigation conducted into the origin and cause of the fire.
   a. Preferably by the investigator.
   b. Explain the reasoning’s and conclusions of the investigation.
   c. Point out the indicators used during the investigation.
      - Burn patterns
      - Smoke travel
      - Cracked window glass

7. Inform the owner or occupant that an official report will be drafted.
   a. It will be available to the owner or occupant.
   b. It will be available to the insurance company.
8. State that information is available to make the property habitable and to salvage personal items.

Instructor note
Advise your students that multiple insurance companies have pamphlets for victims of fire that will inform them what they need to do and the procedures the insurance company will follow once a claim is presented.

d. Advise the victim(s) of the fire of what resources are available to them from other organizations.

a. The American Red Cross.

b. County and State agencies.

10. Inform the fire victim(s) to keep all expense receipts for lodging, food, clothing, cleaning, etc.

a. Some or most cost maybe reimbursable by their insurance company.

b. All cost must be accompanied by a receipts.

B. Undetermined, or those fires that appear unusual in origin.

1. Additional evaluation of the scene needs to be given to those fires whose cause is not readily apparent.

a. Fires that leave unexplainable burn patterns.

b. Fires for which the cause has no logical explanation.

c. Fires that you think were not accidental.

2. Call for an investigator.

a. Secure the scene until the investigator arrives.
b. If the arrival of the investigator is delayed make sure you appoint an authorized person to secure the scene and ensures no one will enter.

c. Leave the barrier tape or rope in place.

d. Inform owner or occupant of the actions you have taken.

e. Do not offer an opinion about the fire to anyone.

Instructor note
Stress to your students that today’s opinion may be tomorrow’s headline and that it could come back and hurt them.

The only statements to the news media should come from the Public Information Officer or the Incident Commander.

Placing information on Facebook or posting something to your webpage is never a good idea.

a. Provide a briefing on all facts collected.

b. Explain your observations.
   - While enroute to the fire scene.
   - Upon your arrival on the fire scene.
   - During your fire suppression activities.
   - During your overhaul activities.

c. Explain what fire suppression activities that you utilized which may have had an effect on normal burning or smoke patterns.
- Ventilation tactics.
- Hose line tactics.
- Defensive or offensive operations.

### III. Evidence Preservation

**A.** When evidence is discovered, do not touch it.

Exceptions.

1. When the evidence may be destroyed by the fire.
2. When the evidence may be destroyed by the collapse of the building.
3. When the evidence may be destroyed by fire suppression activity.

**B.** Protect any evidence that is found on the fire scene.

1. Place a guard (authorized person) by the evidence.

**Instructor note**

Explain to your students that there may be conflicts between what the first responder observed and the final determination by the fire investigator. Your students need to remember, the investigator has received specialized training in the field of origin and cause investigations and has had prior experience in performing fire scene examinations and in determining the origin and cause of a fire.

**Instructor note**

Stress to your students the importance of proper handling and or preservation of evidence. Remind them that found evidence should never be handled by anyone except for the fire investigator or evidence technician. This will help insure the case will not be thrown out of court.
2. Cover the evidence with a container or salvage cover.
   a. It will protect the evidence from possible water damage.
   b. It will protect the evidence from the elements.
   c. It will protect the evidence from other firefighters.

C. Collection of evidence is the responsibility of the fire investigator or evidence technician who
   1. May work with a photographer and/or a sketch artist.
   2. Will maintain an evidence log and numbering system to package and preserve evidence collection.
   3. Will maintain custody, transportation, and laboratory analysis request for all evidence.

D. Chain of custody.
   1. A chain of custody of the evidence proves that the exhibit (item) offered as evidence, is in fact, what was originally collected at the fire scene.
   2. Courts require a log of custody be kept for all evidence.
      a. Who found the evidence at the fire scene.
      b. Who collect the evidence at the fire scene.
      c. Who transported the evidence from the fire scene.
      d. Who accepted the evidence for storage.
      e. Who transported the evidence from storage to the lab.
      f. The names of the personnel who analyzed the evidence.
      g. Who returned the evidence to storage.
      h. Who transported the evidence to court.
   3. If there is any breaks in the chain of custody, courts will rule the evidence inadmissible.
a. A break in the chain of custody can make or break a case.
b. Can be grounds for an acquittal of the defendant.

4. If the first responder must collect evidence:
   a. Place it in a proper container.
      - A clean, unused, unlined, airtight metal container.
      - A glass jar can be used for liquids, if nothing else is available; however they will break if dropped, thereby contamination the evidence.
      - Some paper bags are acceptable.
   b. Photograph the evidence prior to collecting it.
   c. Photograph the area after you have collected the evidence.
   d. Record the date, time and location in the evidence log of where the evidence was discovered.
   e. Obtain a comparison sample for the lab.
   f. The person who found the evidence should collect it.
   g. The evidence once collected needs to be turned over to the Incident Commander.
   h. Who will transfer the custody to the fire investigator or the evidence technician.
      - Record name, date and time of transfer.

E. Contamination of evidence.
   1. Evidence of arson is very susceptible to contamination.
   2. Evidence can be contaminated prior to being discovered or collected.
a. By fire suppression personnel during extinguishment and overhaul.

b. By returning occupants or owners.
   - Who want to view the damage to their property.
   - Who attempt to retrieve their property.

3. Evidence may be contaminated and/or lost if exposed to the elements.
   a. Some accelerants (alcohol, etc.) evaporate quickly.

4. Evidence may be contaminated by the container it is stored in.
   a. Residue in the container from a previous use.
   b. Vapors may cause portions of the container to deteriorate.

F. Cross-contamination.

1. Cross-contamination is the transfer of any liquid or solid accelerant residue from one fire scene or location to another fire scene or location.

2. The possibility of Cross-contamination must be considered at any and all fire scenes.

3. There are four potential sources that can cause cross-contamination:
   a. Tools used in the collection of evidence.
   b. Turnout gear.
   c. Evidence containers.
   d. Portable generators and power tools.

IV. Summary
A. Incident scene security is extremely important to successfully convict an accused arsonist.

1. All first responders must know what actions to take on behalf of his or her fire company, to ensure that no unauthorized personnel enters a fire scene.

2. Persons who gain unauthorized access to a fire scene can remove or contaminate crucial evidence that will be needed for the successful prosecution of the accused arsonist.

B. Proper preservation and/or collection of evidence is probably one of the most critical aspects of the first responder’s duty and responsibility.

1. Without properly collected evidence, an arson case may not make it into court.

2. Legally, the confession, alone, by the accused is not sufficient to obtain a conviction. There must be some other evidence that corroborates/supports the statements made by the accused.

3. When improperly handled evidence is ruled inadmissible by a judge, a conviction will not be obtained solely on the confession of the accused.

V. Review

I. Restricting Entry into the Fire Scene

II. Release of the Fire Scene

III. Evidence Preservation