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## Introduction

This Unit will provide Local Assistants with specific information on the investigation and reporting of fire losses. This Unit is not intended to teach technical aspects of fire investigation and does not contain technical information on fires or the interpretation of fire scene evidence, but is a guide to recommended procedures and processes of fire investigation. There are numerous books and manuals on these subjects that the local assistant may use in conducting a fire investigation. The Office of the Fire Commissioner also provides training courses on fire investigation.

Statistics indicate that approximately 80% of fires can be investigated very easily. The answer to the origin and cause and the identification of circumstances resulting in the fire are readily apparent at the fire scene and usually witnesses will be able to tell the fire investigator exactly what happened. The remaining 20% of fires may require a more in-depth investigation and almost half of this group will require a criminal investigation due to suspicious circumstances.

The local assistant is not asked to be an expert fire investigator, nor a criminal investigator. Where the local assistant can identify the origin, cause and circumstances surrounding a fire, it is requested they report the fire using the forms provided to them by the Office of the Fire Commissioner. Where the local assistant cannot identify the origin, cause and circumstances, where a conflict exists, or where they are suspicious of the fire, the Office of the Fire Commissioner is available to assist in the investigation of the fire. A local assistant need only call the toll free number, 1-800-739-3473, and a Fire Prevention Officer can be assigned to assist in investigating the fire.

## Roles and Duties of the Local Assistant

In Unit I of the Local Assistant's Handbook, the duties and powers given to a Local Assistant under the Fire Prevention Act were presented in general. The local assistant using this Unit must refer to the Act and regulations provided in Unit I to understand these powers and duties more specifically as they relate to the investigation of fires. The Act states:

Through section 2(h) of the Fire Prevention Act, every municipality has a local assistant. There is no municipality where a local assistant does not exist. The local assistant is responsible to (shall) investigate every fire that occurs within their jurisdiction, and must conduct the investigation in a timely manner. (Section 15(1) of the Act) The local assistant is also responsible to (shall) report every fire to the proper authority (section 15(4) of the Act).

Certain fires must be reported within a specified time frame. (Section 15(2) of the Act) The local assistant shall notify the fire commissioner within 24 hours of the commencement of an investigation if:

- (a) the fire is, in the opinion of the local assistant of suspicious origin;
- (b) death or serious injury is involved; or
- (c) the fire involved a building, structure or premises owned or leased by the Crown.

## Powers/Authority Granted by the Fire Prevention Act

To allow the local assistant to properly investigate fires, certain powers and authority are granted. These powers are quite unique and are not to be used, or taken, lightly. The powers and authority are limited to specific parameters and the Local Assistant must be aware of the restrictions placed upon them. These powers are the rights to enter, to examine and to exclude.

The Local Assistant has the authority to request the assistance of a peace officer to exercise the powers given by the Fire Prevention Act to conduct an investigation. A peace officer may comply with this request (see section 12). This section is designed to allow the local assistant to gain the assistance of a police officer. Entry to a fire scene by a peace officer may be made under section 13 of the Act so long as the local assistant takes the peace officer onto the scene (see section 13(1)).

**Fire Chiefs and Local Assistants are cautioned that they may be approached by peace officers requesting them to sign a form delegating their authority to a peace officer for the purposes of fire investigation. It is strongly recommended fire chiefs and local assistants do not sign this form.**

The local assistant does not require a warrant or other authority to enter private property for the purposes of conducting an investigation. This right is based in common law in that there is a greater and reasonable need for public safety than for the protection of individual rights against search in these circumstances. The right of entry is upheld within limitations discussed below.

### Right to Enter

Any fire inspector may, where it is necessary in the conduct of an investigation, at any reasonable time enter on land or into any building, structure or premises and make any examination on the land or in the building, structure or premises where a fire has occurred or is in progress and any other adjoining or nearby buildings, structures and premises.

### Right to Examine and Retain

The process of a fire investigation requires that property be examined and, in some instances, be retained as evidence. The right to examine would be limited if the local assistant could only conduct such examinations on the fire scene. Laboratory analysis or examination by other expert would/could be impossible or extremely impracticable without the right of seizure. Section 13 contains these powers and authority for the local assistant to permit examination and retention of property.

The Act allows for the retention of property or items taken for the purpose of testing or as evidence, as in the case of criminal investigation. The removal of property or items from the fire scene does not transfer ownership these things to the local assistant, just the responsibility for it. The local assistant must make the effort to return items to the owner or dispose of the items as the owner's wishes.

This power was extended to include peace officers under the direction of a local assistant as the police are better equipped to properly handle property items and have access to testing laboratories. Unless the local assistant has proper training and facilities to retain evidence, it is recommended all evidence be handled by a peace officer at the fire scene, and the items taken be left in the control of the peace officer to properly handle the evidence.

### Right to Exclude (Close or Restrict Entry)

The investigation of a fire requires that the fire scene be controlled to allow for accurate information to be gathered. The fire scene where the curious and souvenir seeker have unrestricted access will reduce the possibility of gaining an accurate result of the investigation, and where criminal activity has resulted in a fire, unrestricted access may allow for the destruction of valuable evidence, sometimes deliberately by the arsonist. The exclusion right is intended to protect the fire scene and prevent any disturbance of the signs and evidence that provide a for an accurate investigation, not to cause undue hardship to the persons who occupied the property.

This power must not be used indiscriminately without reason. Persons can be escorted through the fire scene where necessary to ensure evidence is not unduly disturbed.

### Limitations on the Powers and Authority Granted

The local assistant has these powers and authorities granted under the Act, only within very restricted parameters. Other authority(ies) wanting to gain entry to property for investigation or other purposes cannot use the Act.

- The local assistant must be within their jurisdiction.
- The local assistant must be investigating a fire that is known or is believed to have occurred on the property.
- The local assistant must be gathering information for the fire report.

Once the facts of the fire have been determined, the power and authority end and actions taken must be made by permission of the owner or by warrant. The right of entry until the origin and cause have been determined has been upheld in Saskatchewan courts without specific time frame or limitation. The "reasonableness" of the investigation time frame is the limiting factor .

The investigation and subsequent actions taken must be reasonable and within the mandate identified by the Act. Restricting entry simply to use the power to restrict entry is not reasonable. Actions that may be reviewed and questioned are;

searching	seizing
detaining	time of day
the seriousness of the action taken and consequences	fairness
entering	interviewing
use of force	time lapse between events
investigation attitude expressed during the action taken	

The determination of "reasonableness" is subjective, depending on the circumstances. The most attention to "reasonableness" would be given by criminal courts which focus on methods and circumstances used to determine the fire cause. The courts (criminal and civil) take a dim view of unreasonable actions. In order to protect the innocent, simple, but very strict rules must be followed. Where these rules are followed the local assistant will not be restricted from determining the truth regarding the fire even in the deliberately set fire situation.

The Act offers some immunity from liability (section 34) for local assistants, however the protection is limited to the conditions already discussed above. The protection does not allow a fire department or local assistant to act negligently or without due regard to other's rights.

## **Role of the Office of the Fire Commissioner**

The role of the Office of the Fire Commissioner is established in section 5 of the Fire Prevention Act. The Act states the mandate of the Office of the Fire Commissioner in relation to fire investigation as;

- collect and disseminate information respecting fires in Saskatchewan
- keep records of all fires occurring in Saskatchewan including the cause, origin and circumstances of each fire and other information respecting each fire that the fire commissioner considers appropriate
- investigate or cause to be investigated or hold inquiries into any fire whenever the fire commissioner considers it necessary to do so in order to ascertain the cause, origin and circumstances of the fire
- provide for training courses in fire fighting and fire prevention

The Office of the Fire Commissioner maintains records of fire losses as a means to analyze why fires occur and to determine methods of reducing fire losses. The requirement to disseminate (distribute) information is to allow fire departments and fire safety agencies to gain accurate information on fire losses and causes locally, regionally and provincially.

The Office of the Fire Commissioner has specific interest in certain fires as the identified fires are of special circumstances or of specific loss. The local assistant shall notify the fire commissioner within 24 hours of the commencement of an investigation where:

- (a) the fire is, in the opinion of the local assistant, of suspicious origin;
- (b) death or serious injury is involved; or
- (c) the fire involved a building, structure or premises owned or leased by the Crown.

Fires involving circumstances described above must be reported within 24 hours to the Fire Commissioner by telephone or FAX.

With the interest in gaining accurate fire loss information, Fire Prevention Officers are available to assist any fire department, local assistant or statutory authority in the investigation of fires.

To report fires or to gain assistance a local assistant may telephone:

**1-800-739-FIRE (3473).**

## Definition of a Fire

Fires involve many circumstances and can result in a variety of losses. The Fire Prevention Act requires local assistants to investigate fires and report the findings of their investigation to the Fire Commissioner. The question becomes "When is a fire considered a fire loss and when should it be reported to the Fire Commissioner?"

- *A fire is defined as any occurrence of destructive and uncontrolled burning, including explosions, of any material that is a solid, a liquid or a gas where destruction of property, human injury or human death has occurred.*

To clarify this definition, the following examples and situations are provided. When in doubt whether to investigate and submit a report on a fire, contact the Office of the Fire Commissioner for further direction and assistance.

A fire does not have to cause a monetary loss to be considered a fire. A fire in a garbage dumpster or in a ditch along the highway is a fire that should be reported. Forest fires under the Department of Environment and Resource Management need not be reported as a fire incident to the Office of the Fire Commissioner. However, a record should be maintained by the local fire department that responded.

A fire that results due to a motor vehicle accident is a fire. A person killed in the motor vehicle accident may not be considered a fire death, but if the fire department responded to extinguish a fire resulting from a motor vehicle accident, it is considered a fire.

A fire department response to provide; standby in case of fire, rescue or extrication services, or to control hazardous goods spills, is not considered a fire, even if at a motor vehicle accident or in a structure.

Explosions of ammunition or other detonating devices, boiler or pressure vessel ruptures or explosions, and overheated equipment that does not include sustained free burning, are not considered fires unless they cause a fire to occur or occur as part of a fire.

## Fire Deaths and Injuries

Fire deaths and injuries resulting from a fire must also be reported. A fire injury or death may involve a civilian or a fire fighter and a Casualty Report form must be completed and submitted with the Fire Incident Report.

### Civilian Casualty

*A civilian casualty is defined as a person killed or injured as the direct result of a fire or a person who dies of fire injuries within one year of the date the injury was sustained, and who was not a member of the responding fire department.*

To clarify what a civilian fire casualty is, the following examples and situations are provided. If there is any doubt whether an investigation or a report is required, contact the Office of the Fire Commissioner for further direction and assistance.

A person who is injured or who dies from as a direct result of fire occurring from a motor vehicle accident would be classed as a fire casualty. If the person was injured or died as a result of the motor vehicle accident, they would not be classed as a fire casualty even if the vehicle burned and was classed as a fire incident. The coroner's report or autopsy report will provide information on the cause of death. Injuries will involve burns from the fire.

A person who attempts or commits suicide by setting themselves or property on fire, is a fire casualty if they sustain injuries or are killed as a direct result of the fire.

A person may be injured or killed by a fire deliberately set by another person. Injuries sustained or a death occurring as a direct result of the fire are considered reportable fire casualties. If the person was injured or killed before the fire was set to destroy evidence of the murder for example, they are not considered fire casualties. The coroner's report or autopsy will provide information on the cause of death. Injuries will include burns from the fire.

## Fire Fighter Casualty

A fire fighter casualty is defined as *a person killed or injured as the direct result of a fire or a person who dies of fire injuries within one year of the date the injury was sustained, and who was a member of the responding fire department to the specific fire incident.* Further, a fire fighter casualty will include a member of a fire department who is injured or killed while responding to a fire incident, while attending a fire incident, or while returning from a fire incident.

To clarify what a fire fighter casualty is, the following examples and situations are provided. If there is any doubt whether an investigation or a report is required, contact the Office of the Fire Commissioner for further direction and assistance.

Any injury or death of a fire fighter while responding to a fire incident, actively engaged in the suppression of a fire incident, or while returning from a fire incident, where the injury or death occurs as the direct result of fire incident is considered a reportable fire fighter casualty. This includes;

cuts/lacerations	crushing
burns	frostbite
broken bones	strains/sprains
heart attack	falling from
asphyxiation	tripping over

A fire fighter injured or killed during a fire department response, operations or returning to the fire hall where standby services in case of fire, medical, rescue or extrication services, or to control hazardous goods spills, was provided, does not require a fire fighter casualty report.

## Why Report Fires?

Fire Chiefs and/or Local Assistants at times question the need to report fires. Reporting fires is paperwork and many fire department members see their role as putting fires out - not doing paper work.

Accurate reporting of fires, and the use of the information from fire reports, has accomplished more fire fighting, saved more property and saved more lives than every fire department in Canada combined. How?

Accurate fire loss reporting has led to the development of many programs related to fire prevention.

- Flame resistant children's pyjamas,
- child proof lighters,
- flame resistant tent materials,
- flame resistant carpeting

are just a few programs that you may be aware of that were brought about as a direct response to fire loss statistics. Agencies as Consumer and Corporate Affairs use fire loss statistics to improve the fire safety of clothing, bedding and upholstered furniture. When was the last time you heard of a fire in a fluorescent light ballast? Canadian Standards Association (CSA) changed the requirements for ballast construction and design in the mid 1960's as a means to reduce the number of fires occurring in fluorescent light ballast. CSA maintains hundreds of standards dealing with safety in general, but also has many standards that were introduced as a result of fire losses. Standards such as B365 for Solid Fuel Burning Equipment and Appliances that establishes a standard for installation and operation of wood burning appliances. The National Research Council of Canada developed the original National Fire Code of Canada (NFC), based on the fire losses suffered through the misuse of gasoline. The NFC has been expanded considerably since its introduction, mainly to address new fire loss problems and maintain

vigilance over existing and identified fire hazards. All brought about by fire loss reporting. The NRC also uses fire loss information for the development of the National Building Code (NBC).

Educational programs are developed based on fire loss statistics. The Learn Not to Burn program was developed based on information on fire losses involving children. Sparky the fire dog was developed in October 1954 for the same reason.

Provincially, fire loss statistics are also used to develop training programs for fire fighters, identify weaknesses in the Act and regulations and help plan municipal assistance programs. Locally, many municipalities use fire loss statistics for annual budget development, to justify equipment purchase and replacement, to identify needed training programs and to plan future needs for fire services in a municipality.

In the interest of gaining accurate information on fires, the Office of the Fire Commissioner is able to assist in the investigation of fires, through a number of methods. The role of the Office of the Fire Commissioner is not to take over the role of the local assistant, but to aid the local assistant. This allows the local assistant to meet the requirement of the Act, retain control of their jurisdiction and to gain more experience in the investigation of fires through the Fire Prevention Officer.

## **Assistance Guide**

Where assistance is requested or required on an investigation, the following guide is provided.

- (a) Report fires as required by the Act and where assistance is required, to the Office of the Fire Commissioner immediately. The three day rule (section 15(3) of the Act) applies to the Commissioner's Office.
- (b) Conduct a preliminary investigation. 80% of fires require a minimum of investigation time and effort. The details of the fire loss are obvious and easily learned without a massive investigation effort. Where problems in determining origin and cause become apparent, follow steps 3 and 4, and when requesting assistance, indicate why assistance is required.
- (c) Preserve the fire scene. Do not allow unauthorized persons or other agencies, including police and insurance, to enter the scene and disturb it. Ensure fire fighters follow basic rules of overhaul and salvage to preserve evidence. It is almost impossible to accurately determine origin and cause after the scene is disturbed.
- (d) Secure the fire scene. This is especially important if the fire is of suspicious origin. Fire scenes can be secured by requesting the police/insurance to assist in securing the scene. If of suspicious origin or cause, insurance companies will pay the cost of a security guard to watch the scene and prevent unauthorized entry. As a final resort, if reported immediately, the cost of over-time to a fire fighter will be minimal as a Fire Commissioner's representative can usually be on the scene within a few hours.

Fire Prevention Officers can assist in resolving some problems through telephone consultation, and where the need is indicated and justified, will respond to provide assistance. The local assistant should not "fear" asking for assistance from, nor giving assistance to, other agencies involved in investigation of fires. The Office of the Fire Commissioner provides training in the investigation of fires upon request, locally or through other agencies such as the Saskatchewan Police College. Fire Prevention Officers will also assist in the investigation of fires where the local assistant requests. Contact the Office through:

**1-800-739-FIRE (3473)**

## Safety and Equipment

A fire scene is usually an extremely dangerous area. Fire is sometimes called the uncontrolled demolition of a building and the fire investigator must be aware of the damage the fire has caused to the building and take the proper precautions to ensure they will not be injured on the fire scene. The Local Assistant must determine if the fire scene is safe enough to conduct a fire scene examination. They must also insure that anyone they admit to the area is wearing proper protective clothing and is taking appropriate safety precautions. **NOTE: All persons entering a structure must be wearing a PASS device.**

Often the structural stability of the building can be estimated without having to initially enter the building. Ascertain the current status of the electrical and gas services to the structure. Make sure they are shut off. A walk around and visual inspection will provide valuable information that may indicate the hazardous locations. If the fire suppression crew is still at the scene, they can advise on the conditions within the structure. Freestanding walls are usually unstable and likely to collapse by wind or ladders, etc. Stairwells that have suffered heavy damage should be examined closely, if in doubt one should use proper ladders between floors. Be aware of heavy equipment working at or near the fire scene and the possible vibration from this type of equipment. The best advice is to proceed slowly and with caution.

One condition Local Assistants often encounter at the fire scene involves inadequate lighting whether because of the time of day, electricity cut off, or the premises being boarded up for security reasons. Sufficient lighting is necessary to a proper assessment of the dangers.

During inclement conditions in the more remote areas of the province, the Local Assistant may not arrive on a fire scene for several hours after the fire has been extinguished. Snow and ice conditions may make the fire scene too unstable or dangerous to perform the fire scene examination, and should be postponed until conditions permit safe conduct.

In some circumstances, Local Assistants may find that they must work alone during an examination. It is imperative that someone knows where they are and they must set up a prearranged time limit for their investigation. If they do not check in at the prearranged time, then help should be automatically dispatched.

### At the Fire Scene.

1. Work with a partner whenever possible.
2. Establish a buddy system by informing a responsible person:
  - Exact Location
  - Estimated Total Time Away
  - Estimated Time of Arrival back to office or home
  - Definite Check-In Times
3. Obtain current safety information from attending regulatory agencies before entering a building.
4. Obtain safety-related information from owners, occupants, and employees.
5. Conduct an external perimeter examination for stability and other hazardous conditions.
6. Use protective clothing that can be easily decontaminated, do not use leather products.
7. Do not drink or eat around the investigation scene. Rinse your mouth before drinking. Clear your nose and throat.

Certain occupancies will potentially be more likely to produce poisonous gases than others. Greater care must be taken when investigating fires that occurred on these types of premises. Examples of some of these occupancies are:

- |   |   |
|---|---|
| - chemical manufacture and storage      | garden supplies (fertilizers, herbicides, pesticides) |
| - swimming pool supplies (hypochlorite) | farm supplies (fertilizers, pesticides)               |
| - plastic manufactures                  | clothing mills  |
| - manufacturing, storage and sales      | drug stores and hospitals to name a few               |

Some irritants and toxic gases related by the burning of common materials are:

1. Wood, Cotton, Paper and Newsprint produce:  
carbon monoxide   carbon dioxide   formaldehyde   formic acid   methyl alcohol  
acetic acid

2. Plastics produce:  
carbon monoxide    carbon dioxide    hydrogen chloride    aldehydes    ammonia  
cyanide    nitrogen oxides
3. Petroleum Products produce:  
carbon monoxide    carbon dioxide    acrolein

## Hazardous Working Atmosphere

Make sure you have considered the following:

- Provision for plenty of fresh air and ventilation.
- Ensure atmosphere has a sufficient level of oxygen in which to work.
- Ensure atmosphere does not contain flammable gases.
- Wear proper respiratory protection against toxic atmosphere.
- Wear proper filter masks in dusty atmosphere.
- If in doubt, have air quality measured if possible.
- If toxic chemicals are suspected, wear full protective clothing and full face breathing apparatus until proper identification and assessment is made and it is determined to be safe for a lesser level of protection.

## Public Safety

There are two requirements in public safety:

- Warn the public of possible danger.
- Attempt to restrict access on to the property should any danger exist.

By your authority as Local Assistant under the auspices of the Office of the Fire Commissioner, you can post official "KEEP OUT" notices around a fire scene. "Caution" warning tape is often used to cordon off the fire scene. Physical barricades can sometimes be obtained from a municipal Town Yards or Public Works who are often willing to deliver and set up same. When restriction to the property is being challenged, do not hesitate to ask for police assistance. Remember to remove or have any "KEEP OUT" notices removed when the investigation is completed and it is safe to remove them.

## Liability

Safety is a responsibility shared by all authorities at any fire scene, but if no one else has assumed leadership, the Local Assistant should ensure his concerns are being addressed. Once the fire scene examination is concluded, it is a good practice to inform the owners or insurance company of any hazards, and advise them that the property is now available to them.

There will be more discussions in coming years in regards to this topic and the release of property. Some departments in this province are already using release forms for suppression purposes and it may spill over to investigations. The legality of which has yet to be challenged in the courts.

Environmental issues will also be playing an ever increasing role in fire investigations. All agencies are being asked to cooperate to ensure there is no environmental contamination occurring as a result of any fire. If the soil or water around the fire scene has become contaminated, contact Saskatchewan Environment and Natural Resources, Waste Management.

## Safety in Investigating Vehicle Fires

Considerations:

- 1) Location - Be aware if the vehicle is exposed to further hazards due to the fire, threatening weather, or as a result of an accident. Assure that it is blocked or has the park brake applied.
- 2) Condition - Check to determine if fuel is leaking; determine if the vehicle is still electrically energized.
- 3) Chemicals - Ascertain the contents of any cargo, or any unidentified items in the passenger and trunk areas.
- 4) Fatality - Be aware of any human remains or bodily fluid.

If it is necessary to examine the underside of any vehicle, it should be lifted with proper equipment, i.e.: two truck and properly blocked.

Vehicles that have chemicals involved should be examined only when wearing proper protective clothing, such as impervious coveralls and cartridge filter masks. Ensure good ventilation during interior examination.

Vehicles pose a number of hazards that may not be apparent to the untrained person. Pneumatic bumpers, air bags, hydraulic and pneumatic rams on trunks, engine covers and rear doors, air brake systems are just a few of the devices on vehicles which may release unexpectedly and result in injury to the investigator. Fire investigators examining vehicle fires should maintain a high level of training and awareness of hazards from vehicles.

If ever in doubt as to proper procedures, do not hesitate to contact the Office of the Fire Commissioner at 1-800-739-3473.

## Health

The investigation of fires may require physical work in the most brutal of conditions. Investigators should maintain a high level of physical fitness. Investigators should maintain a current immunization program throughout adulthood. Keep current with recent updates and safety training.

## Suggested Personal Safety Equipment

The following listings of equipment are suggestions and recommendations. Investigators may wish to have much less or much more equipment than listed. Equipment and needs are a personal choice.

Multi-purpose Cartridge Dust Masks	Hard Hat
Goggles	Water proof Footwear/Steel Toes and Shank
Work Boots with Steel Toes	Overalls
Rubberized Gloves	Surgical Gloves Rain Gear
Hand Cleaner	First Aid Kit
Fresh Water	Change of Clothes and Footwear
Large Plastic Bags for Contaminated Clothes and Footwear	

## Suggested Equipment For Fire Investigation

Portable Illumination	Hand Lantern	Halogen Lights	Extension Cords
Clamps	Flat Mouth Shovel	Broom	Mop
Crowbar-Wrecking Bar	Knife	Chisel and Hammer	Handsaw
3-5 Prong Rake	Pipe Wrench	6" Ruler	25' Tape
50' Tape	Compass	Graph Paper	Clipboard and Cover
Glass "Canning Jars" (various sizes)	Side Cutters	Plastic Vials	Glass Jars 50 ml
Cotton Swabs	Permanent Markers	Nylon/Plastic Exhibit Bags	
Labels and Tags	Notebook	Tape	Nails
Pliers	Tape Recorder	Paper	Pens, Permanent
InkClipboard&Waterproof Cover	Ziplock bag will protect a camera from debris and moisture	Extra Tapes	Spare Batteries
Camera - 35 mm SLR	Films- Prints B & W	Colour - 400 ASA	Video Recorder
Flash Attachment	Spare Batteries and Tripod		
Spare VHS tapes (correct size)			

## Starting a Fire Investigation

Upon being notified that a fire has occurred, the Local Assistant must consider a number of factors before attending a fire scene.

1. Establish jurisdiction. The fire must occur in the specific geographic area assigned to the Local Assistant. If the fire occurred on federal land, such as an Indian Reserve, or on land under the

control of the Department of Environment and Natural Resources (i.e.: forest fire), it is likely under the jurisdiction of another agency.

2. Notwithstanding jurisdictional limitations, when requested to attend a fire incident within the Local Assistant's jurisdictional area by a recognized authority, (ie: by police even though the fire occurred on an Indian Reserve), the local assistant is obliged to attend.
3. Where a fire death has occurred or where the cause of the fire is suspicious, ensure that the Fire Commissioner is notified.
4. Where the Local Assistant is uncomfortable with investigating a fire (ie: due to the size - type of fire or where circumstances may be seen as a conflict, such as a fire on a relatives or friends property) the local assistant should contact the Office of the Fire Commissioner for assistance.
5. Where an experienced fire investigator has attended the fire scene (ie: fire department) the local assistant may choose to gather sufficient information to complete the incident report and not attend the fire scene. This decision should be based on the confidence the local assistant has on the person investigating the fire.
6. The Local Assistant may be notified of a fire after the time frame permitted by the Act to begin a fire investigation (3 days excluding Sunday) has expired. The Local Assistant may choose not to attend the scene, but should attempt to gather information to complete an incident report. Attempting to conduct a fire investigation after the fire scene has been tampered with or altered usually has little benefit. Information can be gathered from sources to complete a report.

### **Initial Action**

The initial action of the Local Assistant will depend on the information provided to them when notified of a fire occurrence. Depending on circumstances, initial action may be:

1. Attend the fire scene and conduct an investigation
2. Attend the fire scene and assess the situation and determine if assistance is required.
3. Contact the Office of the Fire Commissioner due to circumstances involved in the fire (i.e.: death, injury).
4. Attend the fire scene and secure it or restrict entry until an investigation can be started.
5. Gather information from others to complete a fire incident report.

The Local Assistant should gather preliminary information to determine further action.

### **Scene Security**

A physical barrier to entry should be established as soon as possible. The police and fire department should assist in maintaining security as it is in their best interest to maintain an undisturbed scene. Security can be established by tape, fence, or through securing openings in the building to prevent entry. Maintaining scene security is important, especially when officials are not at the site. Security personnel can be posted on site to ensure no unauthorized entry is made. In most cases, insurance companies are willing to pay for security personnel to watch a scene 24 hours a day as determining circumstances of the fire and protection against further loss of insured property is in their interest.

Due to the uncertainty of scene security, it is important that the scene be photographed, a basic investigation conducted, and possibly, the removal of physical evidence to record information from the fire scene.

These records will be valuable if the scene should be disturbed by unauthorized persons.

### **Agencies Involved in Fire Investigation**

Numerous agencies will be involved in a fire investigation, each having its own role to fulfil. The local assistant should be aware of other agencies and their role and responsibility in the investigation.

The local assistant should begin by introducing him or herself to both the senior fire department member and the police authority on the scene as well as the coroner, insurance representative or other agency that may be present. The current status of each agency should be established and possible duties each has determined.

Possible status may be:

1. Fire Department:

- suppression ongoing
- suppression for overhaul ongoing
- suppression concluded and scene ready for local assistant

2. Police:

- traffic control
- scene security - short and long term
- determining if criminal activity involved criminal investigation due to evidence found assisting coroner

Any overlap of authority should be identified and agreement reached on how to proceed. For example, the coroner may want to hold an inquest, which may include access to the site by several persons at the same time. As a local assistant you may wish to restrict access to the site to preserve possible evidence from further destruction. Both authorities may want the scene undisturbed for their purposes preventing either from disturbing the site. The coroner and local assistant should reach an agreement to allow the coroners people on the scene and preserve evidence for the local assistant through marking areas to indicate there should be no walking on the area or by placing barriers.

Areas of the investigation that require consideration are:

- the order of interviewing witnesses
- statements to be taken from certain witnesses
- security of fire scene
- assistance during the scene examination
- securing physical evidence
- equipment that would assist the investigation
- safety

## Teamwork

Each agency on the fire scene has clearly established and obvious duties.

1. The fire department has the duty to ensure the fire is contained and extinguished. The local assistant has the duty to establish origin, cause and circumstances of the fire.
2. Police have the duty to maintain public order during the emergency, including traffic and crowd control. They also have a duty to determine if a criminal offence has taken place.
3. The coroner has a duty to establish the circumstances where a death is involved.
4. Insurance companies have a contractual obligation to their client (the owner/occupant).

Priority should be established. Normally life takes precedence over property, criminal offences are more serious than human error or accident. The agencies involved should establish the highest priority and agree on subsequent procedures that will meet each agency's responsibilities. Each agency has an obligation to assist with another agency's statutory responsibility or duty. When problems occur, they should be resolved. Local assistants who experience difficulty should immediately contact the Office of the Fire Commissioner.

Generally, attending officials will collectively establish the highest priority and agree on the subsequent procedures that will meet each authority's statutory responsibilities. Each situation will be different, and difficulties arising from lack of experience or appreciation for other agencies will have to be handled in the field as they occur. Any negative occurrences should be passed onto the regional office of the Fire Commissioner. It is important that Local Assistants meet with other agencies before difficult circumstances arise at a fire scene. It is recommended that you introduce yourself as a Local Assistant and verify that they have your name, correct address, and phone numbers where you can be reached.

Regulatory agencies that will most often be involved at a fire scene:

- attending fire department
- Municipal Police Department or R.C.M.P.
- Office of the Fire Commissioner
- Regional Coroners Office

Provincial authorities that could become involved:

- Coroner (Justice)
- Occupational Health and Safety
- Saskatchewan Liquor and Gaming (VLT's in building)
- Gas Safety Branch
- Electrical Safety Branch
- Saskatchewan Emergency Planning
- Saskatchewan Environment and Natural Resources
- Local Building Departments
- Health
- Saskatchewan Housing Corporation
- Workers' Compensation Board
- Boiler and Pressure Vessel Branch
- Elevator Safety Branch
- Department of Highways

The Office of the Fire Commissioner is able to assist in making arrangements or recommendations regarding who to contact when assistance from other agencies, utilities or ministries is required.

## Ensuring Notification of Fires

Many rural municipalities make fire protection agreements with urban municipalities to provide suppression services, but may not designate an urban fire chief as the Local Assistant. The fire chief(s) who respond to fires should be aware of who the Local Assistant is, and how to contact them. RCMP and Municipal police may be contacted regarding a fire, but the fire department is not contacted. **The police should be requested to comply with the Act and notify the Local Assistant of all fires.**

People may have a small fire that they do not report or call the fire department about. The insurance company may attend to settle an insurance claim. **Local insurance brokers and adjusters should be requested to contact the local assistant where they learn of a fire loss so a report may be completed.**

## The Investigation Process

The investigation process may take any form the Local Assistant desires. The Office of the Fire Commissioner recommends that the investigation process follow the methodology outlined by the National Fire Protection Association in Standard 921. A brief description of the recommended methodology follows, with more in depth information included within this Unit on aspects of an investigation. Prior to starting a fire scene examination, take time to develop a plan or procedure to follow. Factors that should be considered in the planning:

- weather; current, pending

- complexity of the fire
- resources: manpower, equipment
- rate of deterioration of certain types of materials
- remaining daylight hours or availability of light
- other essential priorities, i.e.: interviews not completed
- personal and public safety

### **Step 1 Conduct Interviews and Collect Information**

This process is designed to give the investigator basic information leading up to the fire and even some information regarding circumstances during the fire. It also includes gaining information on the building and contents, value of the loss, and possible indications of origin and cause. This step involves speaking to the key persons involved in the fire such as the owner, the last person in the building, the person discovering the fire, the fire fighters and others who may provide information.

### **Step 2 Document the Fire Scene**

Documentation of the fire scene includes photographs, video taping, sketches, drawings, and even notes, which describe or preserve the fire scene. The investigator must observe the general layout of the interior, photographing and sketching in a systematic fashion towards the area of origin. Any important indicators should be measured, recorded and protected for later reference as possible exhibits.

### **Step 3 Exterior Fire Scene Examination**

The exterior examination provides further information regarding the fire and may provide physical evidence of fire cause. This step will familiarize the local assistant with the relationship of the fire scene to surrounding property, terrain, and its overall appearance and condition.

### **Step 4 Interior Fire Scene Examination**

This is the primary and critical step to determining the origin of the fire from physical examination of the fire scene. It is observing and recording the interior of the fire scene in two parts;

- a) probable existing conditions before the fire;
- b) damage caused by fire.

### **Step 5 Fire Cause Determination**

This step must follow determination of the point of origin. This step is subdivided into two functions. There is the determination/elimination of accidental fire cause through the examination of potential ignition sources, and, once all accidental causes have been eliminated, there is the determination of incendiary fire cause indicators.

### **Step 6 Confirmation**

This includes confirming findings from the fire scene examination which may require the utilization of experts in certain fields (metallurgist, forensics) or the taking of statements to confirm that findings are valid. At this point, the Local Assistant should pause and evaluate the situation to determine if additional resources will be needed to successfully conclude the examination. Examples of things to consider are:

- Additional time at the scene
- Additional manpower
- Better working area or conditions
- Opinions and feedback from others
- Technical data or advice
- On site analysis i.e.: accelerant, electrical testing, comparison testing
- On site expertise, fire, equipment, engineering, utilities
- Off site analysis, laboratory
- Additional interviews
- Reinterview certain witnesses

## **Step 7 Conclusion and Reporting**

Once sufficient background information has been gathered and the Local Assistant has as complete an awareness of the origin, cause and circumstances of the fire as possible, the fire investigation results must be documented and reported. It is also recognized that there will be times "unknown fires" are simply due to the fact that all that remains is a "black hole". All fire losses must be reported to assist in determining steps to be taken to reduce the next fire loss and to assist in determining other fire loss prevention programs.

For the majority of fire losses, the fire loss report may be completed by using the Saskatchewan Fire Incident Reporting System forms. The original should be sent to the Office of the Fire Commissioner and a copy retained for the Local Assistant's records. However, where the fire loss involves circumstances such as a death, injury, large fire loss, an appliance failure, or which may result in civil, criminal or other actions being taken regarding the fire loss, it is strongly recommended the Local Assistant complete a narrative report in addition to the fire loss reporting forms. The narrative report should document the investigation as a historical account of all actions taken during the investigation and report all findings and evidence which lead the investigator to a conclusion regarding the fire.

## **Notes on Fire Investigation**

### **Statements and Interviews**

An interview is defined as:

- "A conversation directed toward obtaining information about the circumstances relating to the fire from the persons believed to have been involved, background of persons involved, observations, any other knowledge."

A statement is defined as:

- "Anything said orally or in writing by an accused or witness whether it is in nature of a confession or not."

Local assistants will, for the most part, conduct interviews rather than take statements. Statements may require certain specific legal information to be given to the person making a statement. Local assistants are not required, nor are they asked to be criminal investigators. An interview will be sufficient in the majority of incidences for the local assistant to complete the investigation of a fire.

The purpose of an interview is to:

- a. Collect any facts relating to the fire.
- b. Substantiate or corroborate other facts.
- c. Find additional facts.

The preliminary interview allows the Local Assistant to save time by having an effective start in gaining an understanding of what took place before their arrival at a fire scene. The preliminary interview need not be formalized and may consist of speaking to witnesses while the local assistant makes notes based on their conversation.

Where information is required to conclude an investigation, to confirm information gained from the fire scene investigation, or to gain a better understanding of a fire, the local assistant may be required to conduct a detailed interview.

### **Preparing for a Detailed Interview**

#### **Timing**

It is best to arrange to interview a witness as soon as possible after a fire. However, victims may be under extreme stress with emotions that may confuse their recollection. In such cases, it would be better

to postpone the interview. Alcohol and other influences should be taken into consideration when deciding when to best conduct an interview.

## Location

Preliminary interviews usually occur at the fire scene or first location the witness found. Detailed interviews should be conducted where there are minimal distractions in a room which favours the best possible interview. If the objective is to have the witness relax during the interview, then a neutral location such as a quiet coffee shop, the witness's home or vehicle is best. If added stress or formality is desirable, then your vehicle, fire hall, government office, or even an office at the police station would be appropriate.

The following suggestions are offered:

1. Attempt to conduct the interview privately.
2. Do not conduct interviews in the presence of co-workers; have the employer's cooperation.
3. Interviews of serious or contentious witnesses are best conducted at a police station.

Interviews are not required to include a prior warning. Giving a warning is not accusatory, but is in respect for their right to be informed of what is happening. The warning need not include any information regarding circumstances regarding the fire. The warning need only include information to the person being interviewed why the interview is taking place and that the interview is voluntary and they may choose not to be interviewed. A statement such as:

"The purpose of this interview is to gain information regarding the fire that occurred at (address) on (date) at approximately (time). This interview is voluntary and any information gained from this interview will be used for the investigation of the fire and you may choose not to be interviewed.

You may end this interview at any time."

should be given to the person before the interview.

It is important the witness understand that they are free to leave at any time. If they perceive that they are being detained a court may rule the information to be involuntary, and therefore could not be used as evidence against an accused. The Charter of Rights and Freedom, Section 10 would be used as their defence.

## Persons Involved in Suspicious Fires

Persons who have experienced a loss, know that they will probably be considered a suspect if it is a suspicious fire. Therefore, the person will expect to be interviewed in that light. Normally, suspects will welcome the opportunity to clear themselves from suspicion and to give their side of the story. Any other action would be suspicious and such relation should be passed on to the investigating police officer who is conducting the criminal investigation.

**Caution: Make certain that information only flows from the witness to the investigator. Do not provide new information to the witness.**

## Statements

There are several important and valid reasons why a Local Assistant would be required to interview and try to obtain a statement from the accused. Sometimes it is to clear up some unknowns, discuss any recent renovations, the accused's opinion as to what may have caused the fire, but primarily it is to cover all bases so that the fire investigation can be concluded.

Similar to sharing a fire scene, both the police and the Local Assistant may wish to discuss the best procedure to have an accused or suspect interviewed and a statement taken. Anyone accused of being responsible for a deliberate fire, can still be interviewed for information relating specifically to the issues surrounding the events of the fire by a Local Assistant.

## Voluntary Statements/Interviews

If any part of a statement is to be used as evidence against an accused, or has resulted in further evidence against the accused, it will be a requirement to prove that the statement was given voluntarily to the Local Assistant, before it or related information is accepted as evidence in the trial.

### Procedure

If it is necessary for the Local Assistant to take a statement, or if a suspect insists on giving a statement, the following procedures apply:

1. Begin by informing the witness the purpose of the interview and have the suspect sign, at the end of the written warning, that they understand.
2. No other person should be present during the statement.
3. No distractions during the taking of the statement.
4. Carefully record all conversations during this process.
5. Do not lead the accused by questioning.
6. Record all activities and spoken words during the time you are taking a statement.
7. Mental state and alcohol level of the accused should be taken into consideration.
8. Do not imply any advantage, ramification, or violence during the taking of a statement.
9. Have the accused read, or listen to the statement, and both of you sign and date same.
10. Initial any changes and sign or initial each page.
11. Record the fact if the accused is willing to sign the statement when concluded.

The following suggested Voluntary Statement form may be used.

1. Complete the information on the top of the page for the first page only. Subsequent pages need not be completed.
2. In the "Re:" line, enter a description of what is being discussed, such as, "House fire, 22 October 1998, Richard Smith – Owner."
3. Ensure each page is numbered (Page \_\_\_ of \_\_\_)
4. Ensure the person signs each page.
5. Ensure you initial each page
6. If the last page is not completely filled on all the lines, draw a diagonal line across the unused space and initial across the line. This shows that no information can be added after the witness has signed at the bottom.
7. Either the Investigator or witness may write on the form.



## Documenting the Fire

Documenting a fire scene includes all activities to record and report the circumstances surrounding a fire loss. During the investigation the investigator documents the fire scene through pictures (still and video), sketches, drawings and notes taken at the scene. Once an investigation is completed, the circumstances, findings, conclusions and recommendations have to be duly recorded and reported.

A part of this unit covered reporting fires using the forms provided by the Office of the Fire Commissioner. While these forms may be sufficient to document the majority of fires, the local assistant may choose to add an additional report for their own records. The report forms for the Office of the Fire Commissioner are used mainly to gather statistical information. A relatively simple fire loss can be documented on this form by filling in the blanks. A more detailed fire, especially one which may be suspicious in cause, a fire which may result in litigation (ie: an appliance failure which results in a lawsuit) or a fire where injury or death has resulted, usually requires the local assistant to develop a more detailed report of the fire to document all information in a logical sequence to support conclusions made about the fire. Local assistants may find themselves in court many years after a fire trying to remember what happened at a particular fire. A well written report documenting the fire and the investigation will allow the local assistant to recall all activities and evidence from a fire.

## Why Prepare a Fire Report?

Over the years, perhaps too much emphasis has been placed on the importance of using fire reports for statistical purposes only. While it is true that fire reports provide data to the provincial fire statistics database, they also serve as a historical document that may be the only official acknowledgement that a fire occurred. In most cases the fire report is of considerable significance to people touched by the fire. People who suffer injuries or who lose members of their family have considerable interest as to what went wrong, and will require information to start the healing process. In addition, other regulatory and law enforcement agencies often extract information from fire reports for their own purposes or investigations. Lastly, there are many other uses for fire reports, including analysis, research, product development and education.

A Local Assistant Fire Report should do the following:

1. Provide a historic record.
2. Information source for interested parties:
  - Regulatory Agencies                      Insurance Adjuster
  - Victims and other citizens              Private Investigators
  - Insurance Companies                      Legal Firms
3. Information Source for Fire Prevention
  - OFC investigations, special studies
  - Government, university, private research
  - Community programs and agencies
  - Medical research
  - Manufacturers
  - Standards associations
  - Corporate sponsors
4. Data source for Legislative Requirements
  - O.F.C. Annual Provincial Report
  - Fire Statistics Database

### Tips and Suggestions

1. Whenever possible, Local Assistants should inform the attending agencies and insurance companies what incident number has been assigned to the fire.
2. Timely submissions not only reflect on the Local Assistant's efficiency, they also allow the interested parties to complete their proceedings sooner, thereby reducing costs to themselves and to the consumer as well. Timely submissions are very important in establishing possible new trends that may

warrant certain actions to be considered for better safety. The Office of the Fire Commissioner requests that outstanding Fire Reports be submitted by the end of each month.

3. In fires that have occurred due to equipment failure, it is important to forward the relevant information on the product. This section of the Fire Report is often completely omitted or only used in general terms to describe the type of appliance or vehicle involved. This negatively affects special projects, for example possible recall by the manufacturer, or enlightened consumer programs or education programs.
4. Name all those involved, including individual witnesses, occupants, employees, business and corporate names and the corporate officers.  
All names submitted are maintained in a database at the Office of the Fire Commissioner. This database is used for tracking documents and by investigators from other regulatory agencies. Spelling is crucial, so please ensure names are correctly spelled. The information held by the Office of the Fire Commissioner cannot be released without the permission of the person submitting the report/information. All reports held by the Office of the fire Commissioner are subject to the Freedom of Information Act and regulations and are protected by this legislation.
5. If the circumstance is not made obvious by the fire report, use the narrative portion at the bottom of the Fire Report to complete the picture. In order for a reader to be able to understand the circumstances surrounding a fire, attempt to submit sufficient information that satisfies the who, what, when, where and why questions. Many Local Assistants also forward copies of their narrative report.

## Investigation Reports

In addition to the Fire Report, most Local Assistants prepare a detailed report of some kind. It is not necessary for the Local Assistant to forward this report to the Office of the Fire Commissioner, but it might be beneficial to attach this report.

## Importance of Reports

Regardless if an Investigation Report is incorporated into the narrative portion and attachments of the Fire Report, or is a separate in-house document and not forwarded to the Office of the Fire Commissioner, it serves two primary functions:

1. The report summarizes the investigation in all its aspects by pulling the different parts of the investigation together for the first time. The usefulness of the report will depend upon the quality of the notes taken in the field. In turn, this document becomes invaluable for later review, personal testimony, or research.
2. The report represents the status of the fire at that particular point in time. This will be vital for subsequent investigations (such as criminal or civil). For example, a decision by the police to assign officers to an arson investigation could be based upon the quality of investigation report provided by the Local Assistant.

## Format

For Local Assistants who do not have a standard format, they may wish to consider the format offered in this section.

The Office of the Fire Commissioner recommends the following format as a narrative report on fire losses. This narrative may be filed with the Office of the Fire Commissioner with the fire loss report forms. This is strongly recommended as this action eliminates any doubts that the narrative report is an original report and will be of valuable assistance to the Office of the Fire Commissioner in learning greater details regarding the fire loss.

### Introduction

Should detail when and how the local assistant was notified of the fire. Who reported the loss to them (names, phone numbers) and the actions the local assistant took to begin the investigation of the fire.

### Notification

This section should detail the who, when and how the responding fire department was notified of the fire loss. Who reported/discovered the fire, how was the fire was discovered, what did the discoverer (and/or

other witnesses) do upon discovering the fire. How were all fire fighters notified of the fire and what the fire department did after notification should also be detailed here.

#### Fire Department Response.

This should detail in step by step fashion exactly what the fire department did from the time of notification a fire was occurring until the fire department arrived on the fire scene. Information should include specific details about individuals and what they did as individuals or as a team of fire fighters. For example did some one call the police, an ambulance ? If yes who, at what time, what were they told? Details should be as specific as possible (ie: names and telephone numbers) and observations made by the fire fighters on responding should be included, such as weather information, did they observe someone leaving the area and other observations made during the response to the fire.

#### Situation on Arrival

A complete description of the fire fighters observations of the fire building on arrival should be detailed. How much fire was showing, where was it showing, was the fire large, small, was there lots of smoke or no smoke, how much damage was there to the building, were windows/doors open, broken, failed due to fire, etc. were there people at the scene and what were they doing.

#### Fire Ground Operations.

The actions of the fire fighters, both as individuals and as a fire fighting force, should be detailed in a step by step manner from the time they arrived on scene until they returned to the fire hall. Persons (who), actions taken (what), at what time (when), and the location (where) should be detailed in this section focusing on how the fire department entered the building, performed rescue, ventilation, salvage and overhaul and fought the fire. Fire fighters observations from inside and outside of the building should be detailed as well. It is important that the time to control the fire and the time to extinguish the fire are recorded.

These previous three sections can be extremely important to the fire department and fire investigators who may follow. The local assistant should attempt to be as complete as possible in descriptions and information.

#### Overview.

The local assistant must document the investigation from beginning to end. The overview should be started from arrival on the scene detailing exactly what the local assistant did and observed until they completed the investigation. This section should be an accurate historical narrative of all actions taken during the investigation.

It is suggested that the first part of this narrative include a complete description of the fire building including size (square feet or metres), number of stories, use, occupancy, details of construction and other information that would be important to the description of the building.

Consider the 7 step investigation process recommended in this Unit. This section should include who was interviewed or spoken with during the preliminary steps of the investigation, names, phone numbers and addresses as well as the information gained from the persons should be detailed in this section. How was the scene documented should be detailed including references to picture numbers and sketches that should be included with the narrative report. How was the fire scene examined ? Start at the beginning and describe exactly how the scene was examined until the scene investigation was finished. Detail what was seen (ie: fire patterns) and what they indicated, what evidence was observed and examined (also include what happened to the evidence if it was retained for analysis by police or others) and other observations made during the scene examination.

#### Findings

This section should list, in point form, all pertinent information or evidence that what was found/determined/discovered during the fire investigation that lead the investigator to a conclusion.

#### Conclusion

The investigator should state their conclusion about the fire based on their findings. The conclusion should be a relatively short statement stating the origin, cause and circumstances that resulted in the fire

occurring. This section should be ended with a statement indicating whether the fire was accidental, suspicious, incendiary, or unknown in cause and origin.

### Recommendations

The fire investigation may reveal information besides just the origin and cause of the fire. Certain circumstances may come to light that present hazards to others. It is the true professional who makes recommendations on how to avoid a similar fire loss to the one just investigated, in their report. Information and recommendations on code failures, equipment failure or human practices are welcomed by the fire service community to assist in reducing fire losses.

The fire loss will determine the necessity of the length and complexity of the narrative report. Local assistants are encouraged to complete narrative reports to not only fully document and report fires, but to protect themselves. The narrative fire report should include the following information and pictures, sketches and drawings.

- Title i.e.: Fire Investigation Report
- Date i.e.: Date the report was written
- To/From
- Caption (Re: Name of property or owner, Address, Incident Number)
- Property (Classification, Construction, Style, Condition)
- Occupant (Name, D.O.B., Address)
- Owner (Name, D.O.B., Address)
- Insurance (Adjuster, Company, Policy, Details)
- Loss (Severity, Dollar Value)
- Reasons for Investigation
- Officials Involved
- Dates of Investigation
- Summary/Recommendations
- Attachments
  - Witness Interviews, Statements
  - Exhibits
  - Photographs
  - Drawings

### Fire Death Investigation

A fire death investigation is different to a normal fire investigation. It has an added focus on the fire-death, and attempts to address the reasons why the person(s) expired in the fire. The emphasis is on the "why", explaining how the building structure and the components of heat and smoke prevented the individual from surviving inside, or from safely evacuating the structure. It is different from a Coroner's Report, which is to explain "how" the person met their demise from more medical perspective, natural or unnatural cause.

Because Saskatchewan averages over 20 fire deaths per year, it is important to include components (see below) into a fire investigation. Regardless of whether or not this information is incorporated into your fire investigation report or in the form of a separate document, your findings must be reported to the Fire Commissioner on the Fire Casualty Report.

It will be necessary for the Local Assistant to work closely with the local coroner and with the Office of the Fire Commissioner

#### 1. Background

Building Electric Power Supply, Vertical Openings, Evacuation Drills, Interior Finish, Occupant Activities Fire Department, Means of Egress, Fire Protection Systems, Weather Conditions, Heating Ventilation Systems

#### 2. Fire Incident

Ignition and Fire Department Notification, Fire Department Response & Occupant Activities, Casualties, Damage

3. Analysis  
Ignition, Smoke Spread, Fire Spread, Code and Standards Analysis
4. Discussion  
Conclusion, Contributing Factors
5. Appendices  
Time Line, Tables, Floor Drawings

## File Management System

We have mentioned that it is important to record information using the following techniques:

### Original Evidence

1. Field notes
2. Sketches and measurements
3. Still camera and possibly video camera
4. Photo Log
5. Tape recorder
6. Statements/Interviews
7. Exhibits

From this information, the following documents are generated:

### Secondary Evidence:

1. Preliminary Fire Report (if required)
2. Fire Report and Narrative, Attachments
3. Casualty Report
4. Additional Names Report
5. Update Report
6. Fire Investigation Report (if separate)
7. Drawings
8. Photo layout
9. Transcripts

With this amount of documentation, there is a need to carefully prepare, store and retrieve this information when required. There are two stages of data management; while in the field, and handling and storing of data at the office, along with all subsequent correspondence. Careful thought must be given to the complete process so that material is not misplaced, misfiled, or improperly removed or destroyed. Policy and standard procedures for each step should be implemented. There could be times that any discrepancies in file management could negatively influence financial settlements, criminal investigations, or civil proceedings.

## Note Taking

### Benefits of Note-taking

It is important for a Local Assistant to consider initiating the practice of good note-taking. The investigator's personal notebook is the key to the entire investigation. It is the hub of all incoming information and the record of all activities.

Accuracy and quality are important, so much so that some provincial training programs spend half a day covering the art of note-taking. Three years after the fire, an investigator should not have to say, "I think ..."; the notes should contain the answers.

Field notes are official documents created at or near the time of the fire. The field notebook is considered to be the property of the employer. However, the responsibility of custody and care rests with the investigator. At some time, a Local Assistant will be required to produce this notebook at a judicial review or enquiry, and must show reasonable continuity of possession.

Note taking is beneficial in:

- writing reports
- assisting the interview process
- providing accurate testimony
- presenting a professional image.

## Rules of Note-taking

The basic concepts of note taking are:

1. Note-taking skills are often the only difference that separates a "good" investigator from a "bad" investigator.
2. Notes must be entered as soon as reasonably possible.
3. The content of a notebook is dictated by the Court system, which means that case law determines the acceptability in court.
4. Remember, that a notebook is an original evidence document that will be challenged and examined at some time in the Courts by legal counsel or by the judge.
5. Credibility or believability is the ultimate goal of any notebook.
6. Individual consistency in format is necessary to obtain credibility.
7. The notebook is for business only. Never use it for personal reasons or recording confidential names or information.
8. Never remove a page. Never skip a line. Never block out or erase anything. Cross out an error with a single line and initial it. Use a diagonal line between entries.
9. Do not use your notebook for taking detailed witness statements. This complicates your notebook and the file.
10. Case law dictates that notebooks are the property of the employer.
11. The responsibility of security and continuity belongs to the Local Assistant. Notebooks should be retained for the duration of one's career and until all litigations are finished.

### Murphy's Law (revised):

**"The investigation that has the worst notes will be the first case to go to court."**

## Specialized Investigations

Since you are repetitively conducting one particular type of investigation, you may wish to consider setting up a set of documents ahead of time to simplify your task in the field, using a new book for each assignment, i.e.:

- a. List essential "To Do" as a check list.
- b. Followed by specialized pages of your requirements
  - i) blank for sketches
  - ii) lined for statements
  - iii) graphed for plans
  - iv) outline for drawings to be filed in
  - v) columned for listing exhibits, etc.

Contents of Notebook

- a. General Information
  - i) Your name and I.D. number
  - ii) Date book started and finished
  - iii) Book number
- b. Daily Information (seven days a week)
  - i) Time, date (on and off duty)
  - ii) Day of week
  - iii) Shift
  - iv) Vehicle number
  - v) Partner
  - vi) Weather conditions
- c. Detail of Events
  - i) Time call received

- ii) Nature of incident
- iii) Complete factual information as required
- iv) Diagrams (when required)
- v) Evidence found - by whom, where, how marked, disposition
- vi) Statements (record verbatim important statements by suspects and witnesses)
- vii) Any change in status of previous information
- viii) Descriptions:
  - Suspects, if unknown, may be described by age, height, weight, colour, hair, eyes, ears, nose, walk, dress, sex or other distinguishing characteristics
  - Property should be accurately described by serial number, size, colour, make pattern, initials or other identifying marks
  - The description of a scene referred to should be as nearly accurate as possible - supported by sketches and measurements
- ix) Case numbers

### Describing Person

- a. Give priority to the person - clothes can change
  - i) look for and make special note of outstanding features
  - ii) condition is of importance -
    - rational, tense, upset, calm, giddy
    - sober, impaired, drunk
    - injuries, scars, tattoos
- b. Clothing
  - i) start at the top and work down
  - ii) note if torn, dishevelled, stained, obvious item missing
  - iii) footwear

### General Rules of Maintenance of Notebook

- (a) Use notebooks issued by your respective department
- (b) Use only one notebook at a time
- (c) Make all entries in ink
- (d) Make all entries legible
- (e) Correct errors immediately by drawing one line through the error, initialling followed by the correct entry
- (f) Keep in chronological order
- (g) Do not leave blank spaces of lines
- (h) Print names and addresses
- (i) Do not make personal notes (girlfriend's phone number, etc.)
- (j) Keep control of the notebook
- (k) Photocopy your notes and put into your working file

### Indexing Notes

- a. Number notebooks in sequence on cover
- b. Number pages of each book in sequence
- c. Enter first and last entry date on cover
- d. Maintain a master index of names, items for future reference on first page

### Team Leader of an Investigation

If you are directing an involved investigation and also investigating, you may well be forced to keep two sets of notes, one for your personal activity, and one to maintain account of the overall picture.

Here is a quick and easy method:

- a. Use larger paper (foolscap pad or school scribbler)
- b. Draw 1" wide column vertically down centre of each page

- c. Enter information or job to be done in left column and score line underneath across page
- d. Enter time, date and investigator assigned to problem in centre column
- e. Enter brief description of results in right column
- f. Number each page and index as described earlier.

This method allows ready and total reference to any and all items so far covered and empty spaces on the right side show what is yet to be done. It is particularly valuable in involved investigations that drag on and on. Assign one person responsible for all photographs and maintaining a proper photo log.

For gathering and identifying all exhibits, assign one person responsible for sealing and marking plus cataloguing exhibits onto one log sheet. This person is also responsible for turning all exhibits over for analysis, and tracking their progress and results.

## Photography

In order to have a proper investigation of a fire scene, it must be documented on film. Photographs that clearly show the fire scene are worth a "thousand words". Photographs enhance a verbal testimony or a written report.

Photographs should orient a person to the fire scene, and walk the viewer through the scene. If you would like some feedback, try testing your camera skill out with a colleague, have that person examine your photos to see if they are able to describe your fire scene without prompting.

Videotaping is a powerful medium and can provide excellent coverage. Viewers like it because generally there are less gaps to fill in. The added feature of sound and zoom focus provide variation. It has often been shown a jury tends to better understand the complexities of a fire. Training for using video cameras in fire investigation will soon become a routine part of any curriculum.

## Legal Issues

In a typical hearing, continuity of photographs is not as critical as it is with other types of evidence. It is taken for granted that film must be sent away to be processed. The Local Assistant will be required to identify the photographs in a trial.

The credibility test is, if when presenting photographs at an enquiry or court proceedings, the Local Assistant is able to answer with assurance the question:

*"Does this picture present the fire scene as you remember it on the day in question?"*

Rule: It must accurately depict the material shown in the photograph.

## Helpful Hints

Photography is fairly simple with today's equipment. The following suggestions apply to photography at the fire scene.

1. The camera and flash should be user friendly.
2. Take prints only, not slides. Colour film is preferred in most circumstances.
3. Take angles that will clearly tell the entire story.
4. Photos should duplicate the investigation process, and be arranged in sequential order.
5. Keep unnecessary people, regulatory/fire vehicles, or equipment out of photographs whenever possible.
6. Pictures must fairly represent the scene. Where they do not, due to some special effect, it must be noted.
7. Include at least one wide-angle shot of the property.
8. Maintain one set of prints and the negatives with the file.
9. Photograph all items of physical evidence before they are removed from the fire scene.
10. If available, use the automatic feature that records time and date on the face of the print.
11. Record the number of photos taken.
12. Record the type of equipment used at the fire scene.
  - Type, Name, Model of Camera(s) used

- Type, Name, Model of Flash used
  - Brand, ASA, Colour, Format of Film(s) used
  - Lens used
  - Filters used, if any
13. Each photo must be recorded indicating direction (angle) and location on the photo log or a sketch.
14. To keep your equipment dry in inclement weather, use a zip-lock bag with a hole for the lens.

### Photo Log Sheet

The log sheet is an important permanent record. It aids the process of transcribing the locations of each photo on the final drawings. A photo log is simply a list identifying the camera and lens used, the type and speed (ASA) of film, the roll of film number (in sequence 1 to ##). The list should be kept for each roll of film used and record what each exposure to the film shows. A roll of 24 exposures should list 24 pictures identifying what the picture taken shows. An example follows:

Camera: \_\_\_\_\_ ASA: \_\_\_\_\_ Colour/B&W Roll #: \_\_\_\_\_ Date: \_\_\_\_\_

	Description of Picture	Notes
1	SW corner of living room	Used flash
2	Interior wall of living room SW corner	No flash
3		
4		

## Sketching and Drawing

There are two levels of sketches, and both rely heavily on each other. Field sketches or rough sketches are the primary level followed by the "finished drawings" produced later, and away from the fire scene. The rough sketches are called original evidence and will supersede the finished drawing, therefore the two must always be linked together. The Local Assistant should constantly refer back to their sketches making any necessary additions but they must never alter their rough sketches after they have left the fire scene.

For the purposes of reconstruction, the Local Assistant may find engineering or construction drawings to be a source for information destroyed by the fire.

Accurate measurements should be a routine practice and are an important part of the documented findings. All final drawings except those in a notebook should be identified with name, date and your signature.

### Rough Sketch

The rough sketch is done before any physical evidence is removed. Measurement of important findings and their location should always be taken as routine practice at the same time. A measurement system for a fire scene may consist of one of the following:

- Coordinate system
- Baseline
- Triangulation
- Angular displacement
- Grid system

The measurement findings taken at the fire scene shall be in either the imperial or metric standards.

The number of individual kinds of sketches will depend upon the complexity of the fire scene. The following examples could be considered:

- Site drawings of the property and buildings
- Floor plan of the building
- Area of origin
- Photo locations and directions
- Location and measurement of fire cause indicators

- Location of exhibits taken from the scene
- NFPA Standard 921 shows detailed examples of sketches and drawings and should be referred to.

#### Tools Required:

- Compass                                      Graph paper or notebook
- Permanent pen                                Tape measure - 25' 50'
- 6" Ruler                                        Clipboard with clear plastic cover

#### Items Required on Sketch:

- Type of occupancy (Assembly, Residential, etc.)
- Location (address)
- Orientation (True North, Magnetic)
- Prevailing Wind Direction and Velocity if available, ie: calm, slight, moderate or strong
- Legend for symbols
- Date and signature of the drafter
- Incident Number

Remember: Do not alter or add to any sketch after leaving fire scene.

#### Finished Drawings

A good drawing will be very helpful at any enquiry. It demonstrates seriousness and professionalism.

1. Prepare final drawing to scale or proportion, e.g.: Architectural Scale - "-1'0" ¼" - 1'0" Engineer's Scale - 1"-10'0" 1"-50'0" Metric Scale - 1:100 1:500
2. If not to scale, the drawing must have noted on the legend "Not To Scale".
3. Colour code:
  - Area of Origin
  - Point of Origin
  - Area of heavy, moderate or light fire damage
  - Area of smoke and heat damage
  - Avenue of fire spread or travel
  - Denote photographs and direction
  - Exhibit location
4. Occupancy, location, incident number, date and signature must also be on the final product.

Remember: It is critical that the finished drawing be accurately copied from the rough sketch.

As previously stated, the rough sketches are considered to be original evidence, and these will supersede the finished drawings in importance. Also, the two type must be linked together by proper identification. The original sketch should be kept on file.

## Exhibits

Forensic laboratory analysis involves examination of physical exhibits that have possible human implication of a criminal nature. Normally at a deliberate or suspicious fire, the Local Assistant will work with a law enforcement agency, and the police representative would look after any exhibits. However, this may not always be the case. The Fire Prevention Act permits the local assistant to take evidence under section 13(1). The taking and preserving of evidence must follow specific rules and evidence must be stored and protected. This part offers general guidelines for the taking of evidence and is not an all encompassing manual. Local assistants are strongly encouraged to use police services for the taking of evidence from fire scenes.

#### General Rules for Protecting Physical Evidence

During your external and internal surveys:

1. Flag or mark the locations of those items that need to be examined in careful detail. It warns others to be careful in those areas.
2. Photograph the item in its original state and location before you begin a closer examination.
3. Enter the description and location of the item on the photo log, and rough sketch.
4. If you recognize it as criminal evidence, immediately advise the police.

5. Determine the best method of examining and handling each item. Attempt to use "soft" tools that will not remove or add any marks.
6. Make entries into your field notes of the physical condition, the position of any components (i.e.: "off/on" position, temperature setting).
7. If you elect to leave any evidence in its original location for later removal, protect the item from further damage by coverage it with a box, pail, plastic sheet, etc. Close the room or area off if necessary.
8. Determine who is best suited for removing an exhibit. If you move it, you will be required to testify in court what actions you took regarding the item.
9. If there is a time or risk factor that the evidence may become unrecoverable, then the Local Assistant, after completing the above steps, should plan the best way to gather and containerize the item.
10. Concrete, wood floors, and carpet samples should be gathered at the edge of where the burning occurred. The sample should include both the burned and un-burned portions if liquid accelerant are suspected. (Do not use a gas or lubricated cutting device, i.e.: chain saw).
11. Take several samples from various areas, including a control sample if possible.
12. Containerize each item separately.
13. Tag each sample by time, date, your initials, location and description.
14. Seal the container by tape and initial each tape.
15. Place the container into a locked exhibit box or the trunk of your vehicle.
16. When you turn the exhibit over to another person or agency, properly identify yourself. Record the event in your field notes as to date, time and that person's name.

### **General Rules for Submitting Exhibits**

1. Continuity of Possession - This probably is the most important single requirement placed squarely upon the shoulders of the investigator. He must be assured that the exhibit material offered in court is the material found and that no substitution or changes, in whole or part have occurred.
2. Packaging - Exhibits obtained from different sources, or which are subject to contamination should be packed separately, in order to ensure a comprehensive examination.
3. Conveyance

By hand - avoid excessive handling, body heat, etc. By public - seal exhibits adequately to insure against carrier tampering. By Registered - all exhibits mailed to the Laboratory Mail should be "Security Registered".

4. Special Procedures

Exhibits which are liable to deterioration or contamination should be delivered to the Laboratory as soon as possible.

Exhibits which are flammable or corrosive material should not be shipped via mail, use land conveyance. Explosives and suspected explosive materials should never be brought to the laboratory. Instead contact the Laboratory by telephone for advice. Transportation of Dangerous Goods Act must be complied with at all times.

5. Time Restraints

When a definite court date has been established and a Laboratory examination is requested, submit exhibits well in advance and advise the laboratory of that date.

### **Submission of Exhibits**

There is no charge for government regulatory agencies, (Local Assistants to the Fire Commissioner) for lab work. All exhibits submitted to the Laboratory must be accompanied by a covering memorandum or RCMP Form C-414 attached to the outside of the package or container. It should include the following:

- Section that the exhibits are to go to for analysis.
- Caption of the case.
- Department Number or Local Assistant may use incident number.
- Description of the exhibit material.
- List of the required examinations.
- Any other information that may assist the examiner.

For a comparative analysis of a foreign substance (i.e.: petroleum product in a carpet), a "clean" identical sample of carpet should be collected, and packaged separately.

## Exhibits for Other Agencies

It is appreciated by other agencies when a Local Assistant is knowledgeable of the kinds of exhibits that are important to those agencies, and brings their attention to them.

For non criminal testing or analysis (i.e.: accidental fires, product safety), it is best that the local assistant attempt to contact certain parties that may be involved to determine their interest, knowledge of similar incidents, certification responsibilities, or assistance in arranging for testing. Such parties are:

1. Owner
2. Insurance adjuster
3. Office of the Fire Commissioner
4. Agency that certified the product, ULC, CSA, Warnock Hersey, CGA
5. Provincial utility authority, if applicable.

## Testing Exhibits

The general types of testing that private fire laboratories normally perform for a better understanding of the fire scene are as follows:

1. Testing of material properties such as:
  - ignition - rate of heat release
  - smoke density - flammability
  - flame resistance - fire endurance
  - toxicity - flame spread
2. Special tests for recreating a fire scene. Factors that would be considered are:
  - fire loading
  - properties of the fire
  - human failure
  - mechanical failure
  - heat release rate
  - performance of automatic systems
  - manual suppression
  - barriers
3. Equipment failure testing could include:
  - basic design
  - material or equipment defects
  - assembling
  - modification
  - abuse
  - maintenance

Certain types of analysis services may be available from the following agencies depending on which one provides the certification for the equipment.

Canadian Standards Association (CSA)  
Underwriters' Laboratory of Canada (ULC)  
Warnock Hersey (WH)  
Canadian Gas Association (CGA)

Government Facilities:

- National Fire Laboratory (NFL), Ottawa
- Forensic Laboratory
- Federal Department of Transportation

Other laboratories may be available such as the Saskatchewan Research Council. There would likely be costs associated with their time.

# General Information on Fire Investigation

## Incendiary Fires

Fire investigation training routinely dedicates time to the study of the motives behind the arsonist, but they often barely scratch the surface. Realistically, enormous study is required for a proper understanding of the pathological make-up of the many types of arsonists. Motive, in itself, is not critical to the individual investigations conducted by Local Assistants. Generally, the identification of motive is more relevant to civil insurance claims, certain criminal investigations, and the establishment of patterns or possible targets. Therefore, other than fraud and perhaps juveniles, the concern for the motive behind arsonists should be left to the medical therapy profession. For fire investigation purposes, the greatest benefit is that a suspected motive could be useful to help explain certain fire indicators at the fire scene. If the motive is established, it should be reported for future study.

## Vandalism

Vandalism has the greatest number of incidents of all known motives. Although the fires are normally petty, every year there are schools, park equipment, and vehicles where the dollar loss is substantial. This type of fire is often a hit and run with very little planning or concealment. It is considered a juvenile or young adult type crime.

## Fraud

Fraud fires are for financial gain. It often involves filing false claims:

A home owner burns his home in hopes of collecting insurance to recover his investment.

The business person is over-stocked with obsolete inventory. They burn their business looking for a new start or for getting out of business.

## Mental Disorders

Pyromania has historically been loosely used to categorize people that have some degree of mental imbalance. There are numerous pathological mental conditions that can contribute to compulsive actions that result in fires. Alcohol and drugs are routinely found to be a contributory factor as a form of mental impairment.

## Revenge

Typical characteristics of a spite fire are:

- The fires are set in a personal location, such as on a bed, in an office, in personal photos or mementos, a person's favourite car.
- Accelerant are usually obtained at the scene.
- The fire is sometimes accompanied by other forms of vandalism.

There are a number of reasons for spite. Some reasons are as follow:

- Romantic triangles
- Relationship breakups
- Cheating partners
- Disgruntled employee

## Hero

Hero fires are often meant to be small and may already be extinguished when the fire department arrives. A hero fire setter starts a fire, calls the fire department and then may try to gain attention, for turning in the alarm. He may claim heroic acts as he extinguished the fire, or may be overly helpful to the fire department.

## **Protest/Terrorism**

Throughout history, arson fires have been used for ideological and social protests. It is extremely dangerous as the end justifies the means. Some typical targets are:

- Churches
- Abortion clinics
- Political party headquarters
- Government embassy
- Newspapers or universities
- Adult video stores
- Animal laboratories

## **Concealing Another Crime**

Arsonists will set a fire to conceal another crime including theft and murder.

## **Indicators**

Certain indicators are important for the Local Assistant to understand when investigating a possible deliberate fire. A burning entry way which re-ignites after it has been extinguished can indicate the possible use of an accelerant. The Local Assistant may detect odours of a liquid accelerant. Obstructions at or near the fire scene to impede fire suppression operations. These obstructions could range from cars blocking access to the fire hydrants to furniture blocking the entrance. Incendiary devices found at the scene from candles to matches (located in unusual places or in abnormal number) to rags and paper (sometimes used as trailers) to sophisticated incendiary devices. Fire setters may change conditions at the scene to help the spread of fire. For examples holes may be cut in floors and walls to allow fire easier access to combustibles. Furniture may be arranged or stacked to increase the speed and spread of fire. Fire setters will disconnect a fire detection system or sprinkler system to allow for a greater chance of fire spread before being detected. Evidence of burglaries include forceable entry, missing valuables, tampering with safes and filing cabinets or facilities for storing other valuables. A fire setter may remove irreplaceable personal mementos before setting a fire. A commercial fire may have had valuable inventory or equipment replaced or simply removed. Uneven burn patterns may indicate the use of foreign material intended to increase the spread of fire. Fire in unusual places, away from the main fire or in multiple locations, may indicate suspicious conditions.

## **Professional Fire Setters**

The goal of a professional fire setter is to completely destroy the building by fire, or cause serious business disruption. To achieve this goal this person must have an ample fuel supply, adequate air or ventilation and an ignition source. Most often an arsonist will carefully choose time and circumstance to ensure their escape. A basement also provides concealment of the fire during earlier stages, as well as fires in the back of a building away from the public. Arsonists may set a fire around or near heating appliances, setting the stage for the fire to appear accidental. Be sure to examine the interior and underside of the appliance for traces of a liquid accelerant. Gasoline in the exhaust vent of a clothes dryer is an example.

Liquid accelerant are often used in deliberately set fires because of their availability and ability to produce rapid fires. The method the fire setter chooses to ignite a fire will be closely related to the fuel he uses. A delayed ignition is sometimes used. Cigarettes are not a common ignition source for set fires. However, when used as a timing device in a match book cover, cigarettes can be an effective source of ignition.

Electric sparks can be used to ignite an explosive mixture of fuel and air. Because sparks are generated by electricity they can be used in time delay situations. A short circuit can be set up by means of using just one or two wires of a multi-wire cable placed in conjunction with readily ignited fuel.

There are many chemicals and combinations which could be used to ignite a fire. However, because of the complexity involved in the use of chemicals as an igniter, only the most skilled or professional fire setters would use this method. Therefore, only occasionally will the Local Assistant encounter this form of ignition source.

In summary, it is important that Local Assistants report any suspicious/deliberate fire immediately to the Office of the Fire Commissioner.

## **Local Assistants and the Judicial System**

Under the Fire Prevention Act, the Province of Saskatchewan requires investigations to be conducted solely for the purpose of fire prevention. There are no requirements in this Act to direct a fire investigation beyond determining the circumstances or cause of the fire. Local assistants are not required to conduct criminal investigations are required by law to report any activity known or suspected to criminal to the police. For example, a Local Assistant is not required to establish criminal or civil responsibility, nor is a Local Assistant normally required to initiate any legal action pursuant to a fire investigation. The sole exceptions are violations under the Fire Prevention Act in the course of a fire investigation. In Saskatchewan, the police are the only authority legally mandated to undertake a criminal investigation in deliberate non-accidental fires. It is a police function to prepare and introduce such cases into the criminal justice system.

Establishment of liability and settlements for losses and/or damages resulting from fire is determined in a civil judicial proceeding initiated by offended parties. Although the Fire Prevention Act does not explicitly require Local Assistants to prepare their investigative work for legal purposes, the fact that a court can subpoena such material makes adequate preparation mandatory. In this sense, Local Assistants are extension of the judiciary by default, and may be called upon to present the facts discovered in the course of a fire investigation to any number of different judicial and quasi-judicial proceedings.

This Unit outlines the various kinds of judicial inquiries that a Local Assistant can be called upon to participate in as a result of conducting fire investigations. The kinds of evidence a Local Assistant is required to submit are also highlighted and courtroom conduct and protocol, the concept of expert witness, resume and generally applicable do's and don't's are reviewed.

## **An Inquiry**

Several branches of government have legislative authority to conduct inquiries into significant occurrences that warrant special examination, including the Fire Commissioner under section 17 of the Act. In such inquiries the rules for testimony or evidence are less formal than in a trial, and can be sworn or not sworn, and sometimes include hearsay information. The process is less adversarial than a trial, the objective is to hear all relevant information from those who might be involved or have knowledge. The degree of authority varies; attendance can be mandatory or voluntary, may be able to administer fines or removal of privileges.

Examples of some different types of inquiries:

1. Coroner's Inquest
2. Fire Commissioner's Inquiry
3. Justice of the Peace Inquiry
4. Liquor Control and Licensing Branch hearing
5. Transport Safety Council
6. Parliament or Legislative Standing Committee
7. Ombudsman

The nature and content of information provided by a Local Assistant at an inquiry is determined by the type of inquiry being conducted and what agency or body has initiated it. For example, a Justice of the Peace may require a Local Assistant to provide information before a decision can be taken to issue a search warrant, or before a plea is taken from an accused person. Information provided at such hearings would be sworn testimony. Similarly, a coroner may hold an inquest regarding a fire death, and the ombudsman may conduct a hearing to investigate a public complaint regarding some action or inaction by an agency of the government.

In these settings, the rules provide for a more open exchange of information. A Local Assistant may provide information in a narrative form rather than in question and answer repartee. In these types of hearings, all parties involved may be allowed to ask questions and the presiding official may ask questions of fact.

Deliberate fires are criminal offenses that account for approximately 12% of all known causes of fires in Saskatchewan. However, the number of arson criminal trials that Local Assistants are required to attend is less than 1% of all fires in any given year. This means that Local Assistants have little opportunity to develop their skills in giving testimony. In turn, this requires Local Assistants to methodically prepare for appearances at a criminal trial.

## **Steps of Criminal Proceedings**

For a quick review, the following steps outline the usual order of events:

1. The fire is determined to be deliberate fire by the Local Assistant, or by some combination with other evidence, i.e.: a witness, confession, etc.
2. The police will take information from a Local Assistant and decide if the case warrants pursuing further. When the police successfully complete a criminal investigation and identify a suspect, they will present their findings to a crown prosecutor.
3. Through a review system, the Crown prosecutors office will decide if the case merits the laying of charges and asking for a trial.
4. The accused person will be advised of the charge against them by the serving officer, which may include being arrested and detained if necessary.
5. The courts will schedule an arraignment to hear the accused's plea to the charge.
6. Plea
  - a. If the accused pleads guilty, the court will complete the final stage which is deciding sentence. This process may include a pre-sentence report to be completed before sentencing occurs.
  - b. If the accused pleads not guilty, the court will then schedule a preliminary inquiry. The purpose of a "prelim" is to review the evidence supporting the charge and the defence argument to see if there is sufficient evidence to order the accused to stand trial. If requested, the judge may order evidence not be published for a given period of time including up to the end of the trial.
7. If the judge finds that the accused must stand trial, then dates are scheduled.
8. When the case goes to trial, it is up to the Crown to "Prove Beyond Reasonable Doubt" that the accused is responsible for the crime. The court will first hear the evidence against the accused, and then the defence may or may not introduce new evidence that would prove innocence, or raise doubt against the crown's case. This proceeding is adversarial and operates under strict rules of evidence and admissibility.
9. Once all evidence is introduced and summations have been made, the court (judge or jury) will decide if the accused is guilty of the offence.
10. If guilty, a sentence will be handed down. If found innocent, the trial is over, and the accused is immediately released.
11. There is a right for the convicted or the crown to make application for an appeal trial, challenging the conviction, or the sentence, based on some error during the trial.

## **Civil Trial**

A simple definition of a civil trial is a judicial hearing before a judge where a difference or dispute between two or more parties requires a decision and settlement. Generally, one party has requested that the matter be settled in a court. Both sides will present their story to a judge with respect to whom should be

held responsible. The judge must then decide based upon the Balance of Probability. The concept of "beyond a reasonable doubt" is not applicable in a civil trial.

## Examination for Discovery

Just as in criminal court that have preliminary hearings before cases actually go to trial, the civil court has a similar process called Examination for Discovery. In an Examination for Discovery, the legal representatives for two or more parties in an pending civil action, would be asking the Local Assistant to reveal information to them before a Judge. This is a screening process that will assist the trial process, or maybe even avoid the case going to trial.

Since the majority of "known" fires are found to be accidental, the Local Assistant will find that the likelihood of his attendance being requested at a civil trial is considerably higher than attending a criminal trial. Civil trials are for deciding the settlement between parties. An example is an insurance company that requires subrogation from other parties that are believed to be at fault, i.e.: manufacturers, installers, etc. Another example is a party seeking a court order to force an insurance company to comply with terms of a policy or cease withholding of funds.

Evidence entered into civil court is not bound by the strict rules of evidence or admissibility applicable to criminal trials. Procedures are more open, and issues such as continuity are less stringent.

## Civil vs Criminal

### Rules of Evidence

One of the critical moments of a fire investigation is when a Local Assistant recognizes or is informed that the fire is deliberate. At that point in time, certain elements become involved, and the probability that any evidence gathered by the Local Assistant would be reviewed is increased.

The main areas of concern that involve fire investigations and could be argued in a criminal court of law include:

- the degree of invasion, i.e.: a private home vs business
- the time of entry i.e.: night or day, or the lapse of time after the fire
- the true purpose of the entry
- the degree of force used to gain entry
- type of evidence found within, i.e.: did it serve a useful purpose in explaining why the fire occurred.
- continuity of evidence
- obstructing a Local Assistant
- warning and righting any suspects according to the proper rules
- juveniles' rights
- jurisdiction

The time lapse between the fire and the time the investigation begins, is receiving increased attention in parts of Canada. This could become an increasing factor in deciding what is or is not a legal entry and search. Currently, however, this has not been an issue in Saskatchewan courts due to the three day rule in the Act.

While it is impossible to adequately address these legal issues in this Unit, one should remember that there is no magic in the manner in which a Local Assistant must conduct himself. The basic legal requirements have been discussed and they are straightforward. It is important to note that our society recognizes that individuals have certain rights which are protected by law. A clearer understanding of these rights will ensure that a Local Assistant's investigation will stand up in any kind of court should testimony be required.

Testifying at a trial is still one of the most effective teaching methods for learning one's authority. Don't hesitate gaining this valuable experience. One's personal knowledge, confidence and investigative skills will increase considerably by giving testimony.

Strictly and perhaps a little callously speaking, should an action by a Local Assistant involving some rule of evidence be deemed not to be admissible in a court proceeding, it will not be the end of the world. Nor does it really effect the duty and role of the Local Assistant. The Local Assistant is not a criminal investigator. They are regulatory fire investigators. Should their work be useful for some other purpose by some other authority such as police and Crown counsel, it is their responsibility to determine if the evidence can be used for court purposes. It is their decision to use or not to use the Local Assistant's findings in a criminal court of law.

Notwithstanding this, it is clearly to the advantage of justice that a Local Assistant conduct fire investigations in a professional manner which can produce information that is useful to others. The objectives of fire investigation remains, however, a domain that is guided by the requirements set out in the Fire Prevention Act.

In practical day to day application, the above legal issues are not raised as often as one might think. Entry into a fire scene is generally made without the Local Assistant having prior knowledge of the cause of the fire. Secondly, because the Local Assistant is properly trained in procedures and operates from the premise that no conclusion is possible until the investigation is completed, there is little risk that an individual's rights would have been violated by serving some other purpose. Thirdly since most fires are accidental, few fires result in legal proceedings that involve the above legal issues regarding rule of evidence.

Local Assistants must always be prepared to explain or justify their actions before a court of law. Therefore, proper conduct and procedures are always important.

## **Forms of Evidence**

When Local Assistants are required to testify at a trial or hearing, the facts that they will present will be from:

- Personal Memory (oral evidence)
- Photographs
- Sketches and Floor Plans
- Written Statements
- Physical Exhibits
- Note Book
- Video Tape
- Tape Recordings
- Analysis Reports
- Documentation Reports

## **Court Procedures**

At the opening of most criminal trials, the Court orders that all witnesses be excluded until they are called. You will, therefore, be required to wait in an area outside the courtroom. While outside the Courtroom waiting to give evidence, refrain from discussing your evidence with other witnesses.

When called, come into the Courtroom. The Sheriff will point out the witness box to you. Enter the witness box. Remain standing until you are sworn in by the Court Clerk.

As Crown witness, you will first be questioned by Crown Counsel regarding your involvement in the matter before the Court. When the Crown has concluded its questions, Defence Counsel will question you about your testimony. Once defence is finished, the Judge will then excuse you. Unless directed otherwise, you are free to leave or you may sit in the Courtroom if you wish.

It is important that you bring all relevant information, fire reports, investigation reports, notes, photographs, and any exhibits to the trial. Normally, this is prepared beforehand in consultation with the legal representative.

Refer to a provincial judge as "Your Honour" and direct all your answers for all questions to the judge, regardless of who asked them. "My Lord" or "My Lady" is the proper address to a supreme court judge.

Speak with a louder voice than you normally do (the microphone in front of the witness box is not amplified. It is only recording).

Proceed speaking slowly through your testimony so the judge may make proper notes. Pause between sentences. Be clear about your evidence, refrain from using "I think so" or "I guess".

If you do not clearly understand a question that either the Crown prosecutor, defence counsel or the judge asked, request that the question be repeated or rephrased.

### **General Guidelines for Court Appearance**

Present your evidence in chronological order and in your own words. It is not necessary that evidence be in sequence followed in the investigation as long as it clearly depicts the facts of the case.

Present the facts as you perceived them with your own senses.

Be prepared to identify the exhibits that you personally collected.

Avoid giving opinion or character evidence except in cases where the Crown has qualified you as an expert.

Regardless of your expertise, if asked for your opinion concerning an area that you are not knowledgeable, say so: "I do not feel qualified to give an opinion". Never, never be afraid to say: "I don't know."

Do not show partiality. Give your evidence as you know it whether it be favourable or unfavourable to the accused.

Do not hide a mistake. If you make one, admit it by drawing the Court's attention to it as soon as possible.

Where possible give your evidence from memory. If unsure, refer to your original notes.

Be truthful. No case is worth perjury.

Do not guess.

### **Definition of a Good Witness**

A witness who stands up to a rigorous cross-examination and continues to give evidence and to answer questions in a dignified, truthful and fair manner always earns the approval of all who are in the courtroom. Such evidence is accepted and makes its full impact, and the witness has the satisfaction of knowing that they have been a good witness.

The basic qualities of well presented testimony are outlined in the following illustration:

- P Politeness and respect to the Court on both sides.
- O Opposing counsel is not your enemy.
- L Listen to questions before attempting to answer.
- I Impartiality.
- C Coarse language is only used when relaying direct quotes.
- E Errors and mistakes must be corrected when discovered.
  
- T Truthfulness is your most important attribute.
- E Eagerness to convict is inappropriate.
- S Speak up, speak clearly and speak slowly, be serious.
- T Think about the question before you give an answer.
- I Important to give evidence; Important for proper conduct.
- M Mention any information favourable to the accused if asked.
- O Own words, Own evidence.
- N Neatness and good appearance.
- Y Your story your way.

### **Use of Notebooks During Testimony**

Notebooks are considered the hub or "central data bank" for investigations that will explain how and in what order parts of the investigation progressed, often including times, places, names, and observations. Notebooks are extremely important for inquiries or trials that occur several months or years later after the event in question.

However, a Local Assistant should realize that there is a procedure that must be followed if notes are to be used in a court. There is a legal argument that no reference to notes may be made during testimony without first exhausting ones memory. Nor can one in a court proceeding refer to any notes without first establishing the accuracy and timeliness of those notes to the event. The primary issue is that the testimony cannot be the notebook as the evidence, but the evidence is the recollection of the witness, refreshed by the notebook.

Certain conditions must be met before witnesses may refresh their memory from any writing. Local Assistants must have made the writing themselves, or the writing must have been made by someone in their presence and the content in agreement with their own findings. The Crown will lay the foundation for the application to allow the witness to stimulate their current recollection by asking:

1. Were the notes made at the time or shortly after the event? and
2. Did you use your notes to refresh your memory before testifying today?

Defence Counsel is entitled to look at the notes when cross-examining the witness.

#### Expert Witness

An expert witness is defined as any person who by "knowledge, skill, experience, training or education" has "scientific, technical or other specialized knowledge" which will aid the judge or jury in determining the facts at issue.

Right or wrong, in the field of fire investigation, a lot of importance seems to be placed on being established as a qualified expert. The only advantage is that it allows the witness to express their opinion on certain issues of which they have some expertise, thereby going beyond presenting just findings or facts.

Most Local Assistants may never be required to be qualified as an expert, but will still be required to testify. This is not unusual. Testimony by most police officers is made as "non experts". In the early stages of a criminal proceeding, if Local Assistants believe their findings will require expert interpretation, it is helpful if you inform Crown counsel so that proper arrangements can be made.

### **The Scope of Expert Evidence**

An expert's function is to provide to the court the technical or scientific criteria upon which to evaluate the evidence led, and to form an independent judgement as to its validity.

The expert may give an opinion as to the significance of or the inference to be drawn from proved facts in his area of expertise.

Expert opinion may not:

- usurp the function to the trier (court)
- be received on questions of law
- express opinion on the merits of the case
- be given which in fact is argument
- be outside parameters of the application (beyond those reasons why an expert opinion was needed)
- draw inferences to support his opinion

### **Local Assistant as an Expert**

It may happen that the Local Assistant will be required to give expert testimony. This is the only occasion upon which testifying their opinions will be acceptable.

Should a Local Assistant be required to give expert testimony, a resume' of their experience should be provided to Counsel for the purposes of applying to the Court for qualifying the Local Assistant as an expert.

In a voir dire, the procedure for qualifying Local Assistants will be to examine them/him in detail and to be cross-examined on the experience and qualifications contained within the resume'. The court (judge) will make the final determination as to whether it is appropriate to allow expert opinion testimony to be given.

As regulatory investigators in any form of an inquiry, Local Assistants to the Fire Commissioner are to remain neutral and unbiased, and will testify with the sole objective of serving the court.

Qualifying as an expert on one occasion does not guarantee such qualification of future trials. Each case will require a reapplication. Having been qualified previously will carry some weight, but the judge's decision is independent of other trials.

### Private Investigator as an Expert

It is an important canon in most societies that the innocent be protected. In that light, equal opportunity should be available to all parties in disputes so that the truth may be reached. The private fire investigator provides such a service to the private sector, working for legal firms, insurance companies, manufacturers, private companies, and individuals.

It can be unnerving for a Local Assistant when other "fire experts" have been hired to comment on the same facts providing their own interpretation. Most likely there will also be strong arguments during cross-examinations in the qualifying process. Both of these point to the necessity of being prepared and having testimony organized and correct.

### Defence

Fire investigations conducted on behalf of the defense are used to refute testimony to be given by prosecution or plaintiff witnesses.

Generally, the investigator for the defense will have three possible approaches to use in support of their case:

1. To present new and different information from the fire scene that supports an alternate theory or explanation.
1. To attack the integrity of the opposing expert.
2. To discredit evidence in a criminal trial by raising minimal doubt.

If a private investigator has performed in an unprofessional or unethical manner this matter should be brought to the attention of the prosecutor for possible investigation.

### Interviewing a Local Assistant

On occasion, before a case goes to court, a legal representative may wish to interview a Local Assistant. The lawyer will want to thoroughly determine the scope of your expertise and he may ask a considerable number of questions.

If you are expected to give expert testimony, the likely questions that may be asked can generally be categorized as follows:

1. Expert's qualifications.
  2. Expert's activities and involvement.
  3. Expert's opinions.
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- I. Background and Qualifications
    - A. Resume
    - B. Education
    - C. Litigation Experience
    - D. Publications
    - E. Research
    - F. Professional Organizations
  - II. Materials Provided
    - A. Records
    - B. Literature
    - C. The Specific Product in Suit
    - D. Oral Information
    - E. Other Materials
  - III. The Task of the Expert Witness
    - A. What was the Task
    - B. Defects
    - C. Standards

- IV. Who Gathered Information for the Expert
  - A. Did you personally do all the work that led to your opinions?
  - B. Give full names, addresses, titles.
  - C. What did each of these people do?
  - D. Were you actively involved in their work?
- V. Terminology
- VI. Opinions
  - A. Records Reviewed
  - B. Technical Publications
  - C. Products
  - D. Computers
  - E. Other Equipment
  - F. Anything else done to reach opinions
- VII. Opinions
  - A. Lay Them Out
  - B. Facts
  - C. Reasoning
  - D. Casual Relationship
  - E. Standards
- VIII. Concluding
  - A. Have all the witness's professional opinions or conclusions reached in this case been explored in the deposition?

## **Precautionary Notes**

This Unit provides a brief overview on conducting an investigation. Local Assistants and Fire Chiefs will find the information can assist in conducting an investigation, but the Unit contains no technical information on fire investigation. Local Assistants and Fire Chiefs are encouraged to take training and to read publications on the technical aspects of investigation. Recommended reading;

NFPA 921 Standard on Fire and Explosion Investigation  
Kirk's Fire Investigation  
NFPA Handbook (current edition)