FIRE INVESTIGATION 1B

Approved by the Statewide Training and Education Advisory Committee

Adopted by the State Board of Fire Services

STUDENT MANUAL

2000 Edition

California Department of Forestry and Fire Protection

State Fire Training

FIRE INVESTIGATION 1B

TECHNIQUES OF FIRE INVESTIGATION

STUDENT MANUAL

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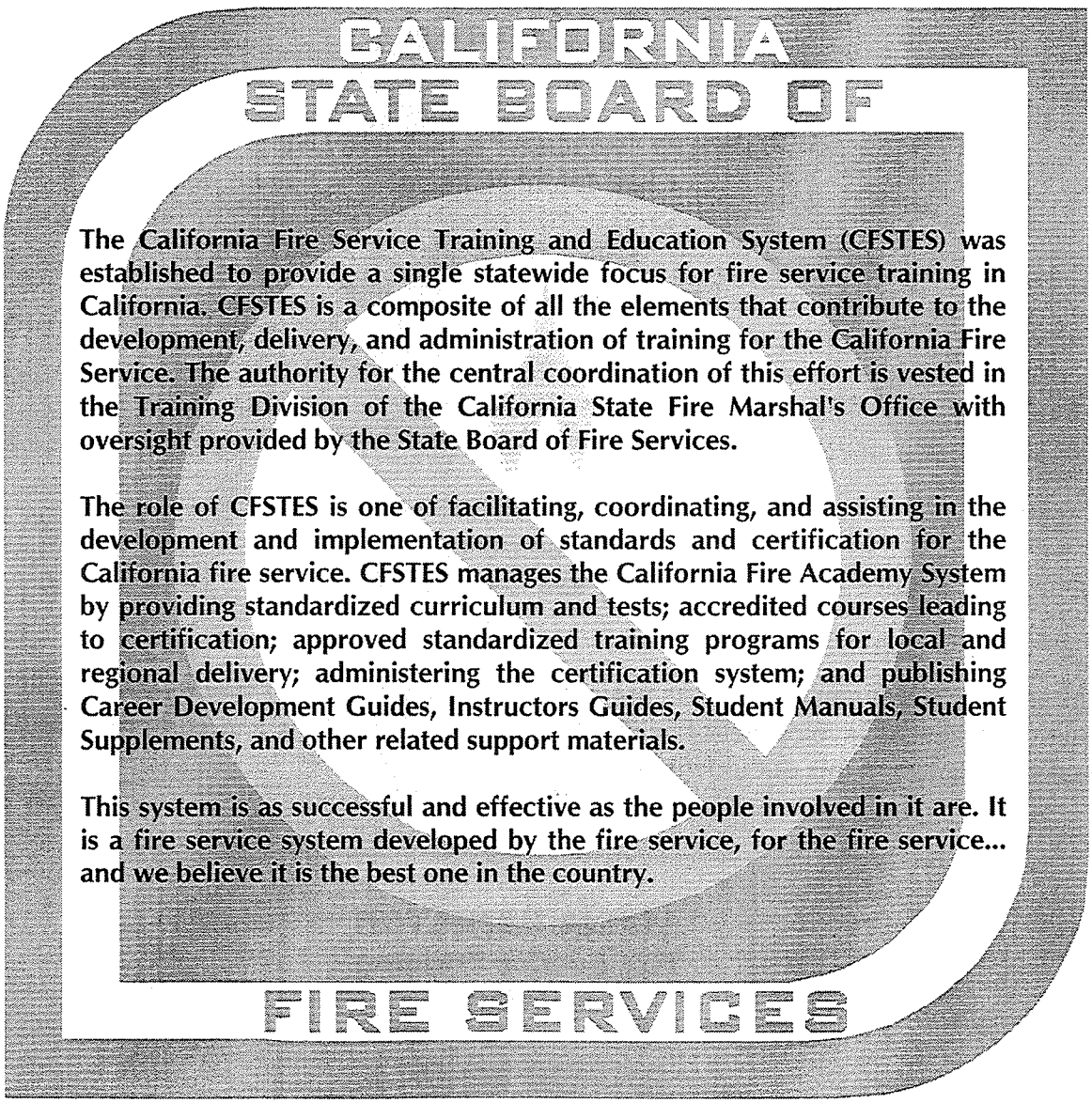
STATE FIRE TRAINING MISSION STATEMENT

The mission of State Fire Training is to enable the California fire service to safely protect life and property through education, training, and certification.



The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California Fire Service. The authority for the central coordination of this effort is vested in the Training Division of the California State Fire Marshal's Office with oversight provided by the State Board of Fire Services.

The role of CFSTES is one of facilitating, coordinating, and assisting in the development and implementation of standards and certification for the California fire service. CFSTES manages the California Fire Academy System by providing standardized curriculum and tests; accredited courses leading to certification; approved standardized training programs for local and regional delivery; administering the certification system; and publishing Career Development Guides, Instructors Guides, Student Manuals, Student Supplements, and other related support materials.

This system is as successful and effective as the people involved in it are. It is a fire service system developed by the fire service, for the fire service... and we believe it is the best one in the country.

ACKNOWLEDGMENTS

The CDF/State Fire Training Curriculum Development Division coordinated the development of the material contained in this guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) approved this curriculum. This curriculum is appropriate for fire service personnel and for personnel in related occupations that are pursuing State Fire Training certification.

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Special acknowledgement and thanks are extended to the following members of CDF/State Fire Training Curriculum Development Division for their diligent efforts and contributions that made the final publication of this document possible.

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The material contained in this document was compiled and organized through the cooperative effort of numerous professionals within, and associated with, the California fire service. This 2000 edition of Fire Investigation 1B represents a collaborative effort and we gratefully acknowledge the individuals who served as the principal developers for this document.

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"We gratefully acknowledge the hard work and accomplishments of those before us who built the solid foundation on which this program continues to grow."

INTRODUCTION TO THE MANUAL

This publication is intended to serve as the student manual for the course. For easier use, the student manual is divided into two standard sections common to all courses.

STUDENT MANUAL

- ❖ Informational pages for the units and topics and corresponding to the instructor guide.

APPENDIX A – Slide Notes

- ❖ Every slide developed for the course is printed three to a page with a space for taking notes.

Additional appendices may be added as necessary to meet minimum course requirements.

State Fire Training gladly accepts your comments and suggestions for future enhancements or revisions to this document. Please forward to:

STATE FIRE TRAINING
Curriculum Development Division
4501 State Highway 104
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COURSE TITLE: FIRE INVESTIGATION 1B
Techniques of Fire Investigation

COURSE OBJECTIVES: To...

a) provide an insight on the motives of arsonists.
b) provide information on scene safety for the investigator including post blast investigation.
c) provide information on evidence recognition, documentation, and preservation including scene photography and trace evidence.
d) provide information on witness and suspect interviewing and interrogation including juvenile law.
e) provide information on fire fatalities and injuries including scene investigation and mechanism of injury.
f) provide information on documentation of findings including case reports, insurance information, and other resources available to the investigator.

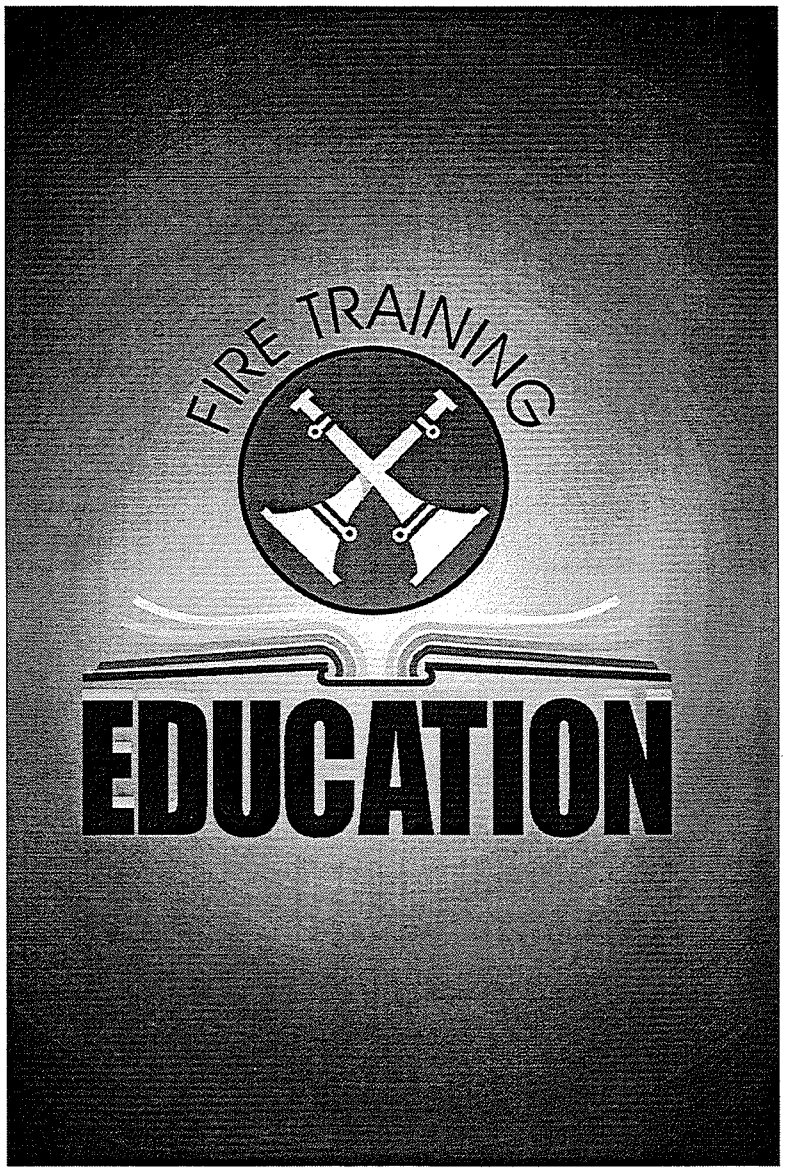
COURSE CONTENT:.....40 HOURS

UNIT 1: INTRODUCTION & REVIEW
Introduction to Investigation 1B 2:00
UNIT 2: MOTIVES
Motives 4:00
UNIT 3: SCENE EXAMINATION
Scene Safety for the Investigator 1:00
Post Blast Investigation 1:00
UNIT 4: EVIDENCE
Scene Photography 2:00
Evidence Recognition, Documentation, and Preservation 4:00
Trace Evidence 5:00
UNIT 5: INTERVIEWING
Introduction to Interviewing 2:00
Techniques of Interviewing 7:00
Introduction to Juvenile Law 1:00
UNIT 6: FATALITIES AND INJURIES
Scene Investigation 2:00
Mechanism of Injury 2:00

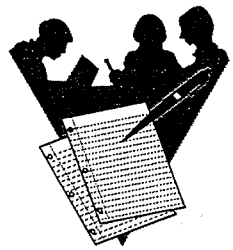
UNIT 7: INFORMATION RESOURCES

TEXTS & REFERENCES:

- "Interviewing and Interrogation Techniques, Part I", POST video broadcast 4-23-93
- "Interviewing and Interrogation Techniques, Part II", POST video broadcast 4-23-93
- California Criminalistic Institute
- California Insurance Code
- California Legal Source Book
- California Peace Officers Legal Sourcebook, Department of General Services, Chapter 7, Current Edition
- California Welfare and Institutions Code
- Explosive Recognition and Reconnaissance, Student Manual, California State Fire Marshal's Office, 1991
- Fire and Arson Detection, Federal Emergency Management Agency, National Fire Academy, 1996
- Fire Fighter Line-of-Duty Death and Injury Investigations, IAFF, 1997
- Fire Investigation 1A Student Manual, SFT, 1996
- Fire Investigation 1B Student Manual, SFT, 2000
- Guide for Investigation of a Line-of-Duty Death, IAFC
- Introduction to Fire Origin and Cause, IFSTA, Second Edition
- Kirk's Fire Investigation, John DeHaan, Brady Prentice Hall, 4th Edition, 1997
- Law Enforcement, Investigative Services Branch, California Criminalistic Institute
- NFPA 921 Guide for Fire and Explosion Investigations, NFPA, 1998 Edition
- Peace Officer Background Investigation, POST, 1991
- Physical Evidence Bulletins, California Department of Justice, Division of Law Enforcement, Investigative Services Branch
- Physical Evidence Bulletins, California Department of Justice, Bureau of Forensic Services
- Post Mortem Protocol, Foundation for Fire Safety, 1983
- Serial Arsonist – Investigative Considerations, Allen D. Sapp, Timothy G. Huff, G.P. Gary, and David J. Icove of the FBI National Center for the Analysis of Violent Crime (NCAVC)
- State Fire Training Policies and Procedures, SFT, 1997
- The Investigation & Prosecution of Arson, CDAA & SFM, Second Edition, 1995


FIRE TRAINING
EDUCATION

ACTIVITY SHEET 1-1-1



FIRE INVESTIGATION 1A REVIEW

TIME FRAME: 1:00

MATERIALS NEEDED:

- Pen or pencil

INTRODUCTION:

This activity provides you with the opportunity to refresh your memory before receiving new information in the Fire Investigation 1B class. Experience has shown that many students do not enroll in this class immediately following Fire Investigation 1A, and therefore, need an activity that will bring them "up to date."

DIRECTIONS:

Answer each of the following questions in the space provided. Be prepared to review your answers with the class.

1. Name a liquid having a flash point at or above 100°F. *(Investigation 1A Student Manual, page 18)*

   _____

2. What is the ratio of a given volume of vapor to an equal volume of air? *(Investigation 1A Student Manual, page 18)*

   _____

3. What are the four methods of heat transfer? *(Investigation 1A Student Manual, pages 22-23)*

   _____

4. What is flashover? *(Investigation 1A Student Manual, page 23)*

   _____

   _____

5. What method of heat transfer is most responsible for fire spread during the advanced stages of a structure fire? *(Investigation 1A Student Manual, page 23)*

6. Which amendment of the Constitution protects citizens from unreasonable searches and seizures? *(Investigation 1A Student Manual, page 35)*

7. What is the significance of Michigan vs. Tyler (1978)? *(Investigation 1A Student Manual, pages 48-52)*

8. What is the significance of Michigan vs. Clifford? *(Investigation 1A Student Manual, pages 48-52)*

9. What is the Penal Code section that describes the punishment for arson? *(Investigation 1A Student Manual, page 64)*

10. What is the Penal Code section that describes the punishment for unlawfully causing a fire? *(Investigation 1A Student Manual, page 64)*

11. What is the Penal Code section that describes the punishment for attempted arson? *(Investigation 1A Student Manual, page 64)*

12. What is an Inspection (Administrative) Warrant? *(Investigation 1A Student Manual, page 38)*

13. What can an inverted "V" burn pattern indicate? *(Investigation 1A Student Manual, pages 85-86)*

14. What are three types of fire causes? *(Investigation 1A Student Manual, page 120)*

15. What are five different indicators (red flags) of arson? *(Investigation 1A Student Manual, page 214-215)*

16. What is the significance about the location of a fire within a structure? *(Investigation 1A Student Manual, page 201)*

17. What is "negative corpus?" *(Investigation 1A Student Manual, page 204)*

18. What is an accelerant? *(Investigation 1A Student Manual, page 7)*

19. What is pyrolysis? *(Investigation 1A Student Manual, page 20-21)*

20. What is the "plain view" doctrine? *(Investigation 1A Student Manual, pages 59-61)*

UNIT 2: MOTIVES

ARSON MOTIVES

Investigators frequently confuse "motive" and "intent." Blacks Law Dictionary defines motive as "an inner urge that prompts a person to action with a sense of purpose..." As it relates to fire setting, it is the reason why someone would deliberately burn property (or have someone burn it for them). Intent is defined as one's mental attitude, including purpose, willfulness, determination, etc., at the time of doing the act -- the "deliberateness" of the act. There are six general motive categories pertaining to arson that will be discussed.

1) Revenge/Spite
2) Excitement
3) Vandalism
4) Profit/Fraud
5) Crime/Concealment
6) Extremist

The term "pyromania" is not listed as a motive. This term is related to an individual's mental health condition as determined by an appropriate medical official. There exists some disagreement among the medical community relating to pyromania. It is recognized that some individuals are obviously mentally ill and suffer from delusions. They may respond to voices within or without their minds or they may be directed to set fires by a variety of animals. Some say they are responding to God's orders. Pyromania is a mental state instead of a motive for fire setting. Due to this medical classification, it is not listed as an arson motive category here or in the Federal Bureau of Investigation Arson Manual.

It is, however, this condition most people refer to when they use the term "firebug." Only a very small percentage of all arsonists are considered pyromaniacs, although they are responsible for large numbers of fires due to their tendency to set many small fires in a short period of time. David Berkowitz, New York's "Son of Sam" killer, admitted to setting approximately 2,000 fires in New York over a three-year period. Such behavior usually starts with the setting of small fires and progresses to larger, more damaging fires.

Although motive is not an essential element of the crime of arson . . . and legally it need not be established or proven in court . . . the development of the motive by the investigator often leads to the arsonist. Establishing the motive will provide the prosecution with a vital argument to present to the judge and jury.

REVENGE/SPITE

This motive relates to hate and spite and is by far the deadliest motive. Fires are set in retaliation for some injustice, real or imagined, by the offender. The fire setter may act spontaneously or carefully preplan each action. Sometimes the location of the fire may provide some insight into the revenge motive. Revenge can also be a part of the other basic arson motives. Retaliation against society or an institution or group may be the primary reason for the fire. Persons that have a desire to be a fire fighter but cannot make the grade may resort to arson as a means of getting even for not qualifying for the job.

Investigative Consideration[1]

FBI Study, Revenge-Motivated

- Fires set in retaliation for some injustice, real or perceived
- Contact history is usually found
- These offenders usually have a long history of institutionalization
- This subgroup averaged 10 years of education
- Likely to set fire in buildings (other than residences), vegetation and vehicles
- Substance use before fire activity

FBI Study, Societal Retaliation

- Targets are random and often escalates in fire setting behavior
- May have a long term health related problem
- Most dangerous of the serial arsonists
- Most often acts alone
- Generally targets structures
- Usually set in the late hours

[1] *FBI studies taken directly from Serial Arsonists—Investigative Considerations, by Allen D. Sapp, Timothy F. Huff, G.P. (Gus) Gary and Dave Icove of the FBI NCAVC*

- ❖ Targets are usually accessible to the offender
- ❖ Forced entry not required

FBI Study, Institutional Retaliation

- ❖ These offenders may strike repeatedly at the target represented
- ❖ Often set more than one fire at the location

EXCITEMENT

The excitement and emergency activities surrounding a fire have a strange effect on some individuals. People seeking attention may set fires so they can participate directly in the rescue and fire suppression activity. Volunteer fire fighters have been known to set nuisance fires in structures, vacant lots, and dumpsters in order to respond to the scene. Security guards may set fires for recognition or even to ensure their value to the company that employs them. A careful check of the backgrounds of these people is critical; particularly checking previous employment and any previous fire activity they may have been involved. Determine if any fires have occurred on the property they were assigned to protect.

Chronic fire setters will often "discover" and report the fire. "Discovering" their own fire apparently gives them some pleasure, which is increased when they are on the spot waiting for the fire department's arrival. They may actually participate in the fire-fighting activities, such as entering the building, operating hose lines, and giving instructions to the fire fighters. Any individual, regardless of occupation and reputation in the community, who discovers an unusual number of fires, should be considered a suspect until they can be eliminated. Anyone hanging around the fire station, asking questions about a fire, or displaying an undue interest in a fire, should also be considered a suspect.

A fire setter may not leave the scene of the fire in its early stages, since the reason for setting the fire may be to obtain some gratification or satisfaction from watching it. Time must be taken by the investigator to observe the crowd at the fire scene in order to find familiar faces. The cooperation of the other fire and police personnel is necessary. Pictures of the bystanders taken by investigators, the news media, or others should be enlarged and studied in detail. The arsonist may act peculiar and appear to enjoy the fire by laughing and joking. This conduct sharply contrasts with the rest of the crowd at the fire scene.

Investigative Considerations[1]

FBI Study, Recognition-Motivated

- This group may act to relieve boredom and gain recognition
- Generally sets nuisance fires in varied locations
- These offenders often act or interject themselves into some activity related to the response to the fire
- A delay mechanism may be used to prevent early discovery
- This group had the highest educational level of the motivational subgroups
- All were familiar with areas in which fires were set
- Usually returned within one day to the scene

FBI Study, Excitement-Motivated

- Generally, a single white male
- These groups of offenders usually have set their first fire by age 12 and will set approximately 40 fires before cessation
- The stereotypical excitement motivated arsonist who sets fire for sexual gratification is quite rare
- Targets range from nuisance fires to occupied residences at nighttime
- Does not usually remove anything from the scene
- May observe the fire fighting response; however, not necessarily directly at the scene
- Generally returns within 24 hours of the fire setting activity

[1] *FBI studies taken directly from Serial Arsonists—Investigative Considerations, by Allen D. Sapp, Timothy F. Huff, G.P. (Gus) Gary and Dave Icove of the FBI NCAVC*

FBI Study, Excitement-Thrills Motivated

- This offender is probably the most dangerous of the serial arsonists as he is likely to set larger and more high risk fires
- This offender enjoys the feeling of power his activity brings him
- This offender has extensive history of institution contact
- The fires are premeditated and planned
- This offender may force entry to a target if necessary
- This arsonist gives little or no thought to the possibility of being caught

FBI Study, Excitement-Attention Motivated

- Fires were set close to home or place of employment
- These offenders acted alone—targets selected to yield minimum damage
- On average were questioned four times before being charged

VANDALISM

Two or more juveniles, for "kicks" or excitement, usually carry this out. Quite often, when they are apprehended, they cannot explain why they set the fire except to say "just for kicks" or for "something to do." Schools are a prime target although trash dumpsters, vacant lots, and wildland fires are popular targets also. Often they use items found at the scene.

The fire setting is usually disorganized. Entry may be forced and graffiti may be present. Juveniles tend to be destructive and cause property damage before setting the fire.

Investigative Considerations[1]

FBI Study, Vandalism-Motivated:

- One of the most common targets of this offender is schools or school property and education related facilities
- These offenders frequently target abandoned structures and vegetation
- This serial arsonist is likely to have a history of institutional contact
- This offender also has probably had a history of multiple contacts with authorities
- This offender attacks areas with which he is well acquainted
- Typically the fires will be set within one mile from the offender's residence or place of work

Fire experimentation, by children, is generally conducted in hidden places; i.e., closets, sheds, garages, vegetation, etc.

PROFIT/FRAUD

One of the most common motives is profit. The strike of a match can eliminate outdated stock, remodel a store, repaint the kitchen, and so on. Unfortunately, profit motive can also include fire fighting resources such as volunteers, paid call fire fighters, overtime pay, and equipment for hire. The benefits of having a "chance" fire are endless. A fire can salvage a failing business, destroy records that were about to be audited, or remove a condemned building while selling it to the insurance company. This motive may be found in the suspect's history of previous losses.

The arsonists will justify their actions to themselves, to their conscious. Apprehended suspects often state that no one got hurt and the insurance company owed them for all the years they never had a fire or collected on a claim. In some cultures, it is socially acceptable to burn a business to prevent it from failing. You may discover that the proprietor of a burned business had previously discussed its burning with other business associates.

There are incidents when the fraud motive is not so recognizable. The insurance policy coverage is well below the value of the property. A person may look financially sound on the surface, but do not stop there. An in-depth review of their background may reveal otherwise. A thorough background check

[1] *FBI studies taken directly from Serial Arsonists—Investigative Considerations, by Allen D. Sapp, Timothy F. Huff, G.P. (Gus) Gary and Dave Icove of the FBI NCAVC*

of the insured may reveal other fires in their past. It is not uncommon for their first fire experience to be an accidental fire. Years later the insured may recreate a fire similar to prior occurrence.

Case History

A professional person, well known and respected in the community, has a total loss fire while he was in Europe on vacation. The house, under construction for three years, was burned to the ground. The building was valued at about $400,000. Insurance coverage was $250,000. It would appear, on the surface, that the owner could not have profited from setting the fire. To complicate matters it was discovered that a group of radical environmentalists had made threats against the owner.

Scrutiny of the owner's background revealed he owned 2,000 acres of prime land. The taxes had not been paid in five years. Though he was wealthy, he did not have liquid assets. Several short-term notes were maturing and he needed cash, about $250,000 would give him the money needed for back taxes and other loans. His prior history also revealed he had experienced a fire about ten years before.

Fire may be used by criminal elements to directly or indirectly increase profits: 1) extort money, 2) remove competitors, or 3) organize or disrupt union activities. Organized criminals may buy and sell a piece of property among themselves at greatly inflated prices with little or no original investment. When the building burns, the insurance settlement can be enormous compared to the investment.

Small to medium businesses may be purchased by fraud rings. The assets are sold, stock is liquidated, furnishings and fixtures are removed, and what remains is burned. A claim is submitted and collected on for the loss of a successful business.

Do not overlook the residential fire. The owner may have just recently been transferred to another city or may have lost a job. In either case, the house must be sold. A slow seller's market and timeliness may convince the owner to burn the house, collect the insurance, and be on his way. Again, the insured's fire history may reveal this has happened before, including remodel or cosmetic fires.

Case History

A divorcee hired her ex-husband to burn her home while she was visiting Disneyland. He made it look like the house was broken into by juveniles. He scattered lawn furniture in the pool, broke some glass containers on the patio, and then set fire to the house. The ex-wife had her insurance papers in her pick-up truck along with the cash and coins she needed to run her business. Her pet dog had been put in a kennel that weekend also.

After a thorough eight-month investigation that included fire and sheriff's investigators, the District Attorney's office and an insurance investigator, the ex-wife was arrested for insurance fraud. She later testified against her ex-husband and he was convicted of the arson. Her downfall was greed. She had

claimed the loss of valuable silver items that the fire fighters remembered salvaging undamaged. She also admitted to attempting to burn the house on a prior occasion, but was unsuccessful.

FRAUD FIRES

The key to breaking many arson fraud cases is the meticulous investigation of the debris. Photograph and document everything. When an inflated claim is submitted at a later date, you must be able to show by your case report if it is fraudulent.

The investigation may be able to prove arson, but it may not be able to prove who set the fire. You may feel that the owner is responsible, but has an airtight alibi. You have a second chance to prove your case however, and that comes with the proof-of-loss claim. This is where greed often gets the best of the insured. This is the owner's chance to not only get paid for the burned business, but to also make an additional profit by claiming contents that were not on the premises or by inflating the value of those that were.

A detailed interview of fire fighters about their observations during the fire's overhaul phase can establish some of the building's contents. It can also verify items that did not burn and were removed from the property before the arrival of the insurance or fire department investigators. Unless a thorough investigation report was prepared, the arsonist may slip away and never be apprehended and prosecuted.

In the investigation of fraud fires, it is very important to determine where the money goes and what that money does. Poor business operations leading to bankruptcy, high debt service, or loss of reputation within the community are in and of themselves motives for a fraud. They are the parts that lead one to develop the motive to defraud the insurance companies. Business related fraud always has a traceable paper trail.

The following basic examples of fraud methodology are intended to help the new investigator recognize the conditions where a fraud may be occurring.

Real Estate

ABCD Corporation

Mr. "A" purchases a home and sells it to Mr. "B" for $30,000. Mr. "B" sells the home to Mr. "C" for $40,000. Mr. "C" sells it to Mr. "D" for $50,000. The home is now insured for $50,000. Mr. "D" has the home burned and collects the inflated insurance coverage. It may take a year to pull this deal off, but there is a guaranteed $25,000 tax-deductible profit. The inflation rate shown in this example is low; in reality the inflation rate should be near 400%!

Planned Bankruptcy

A Corporation purchases an established business operation and immediately increases its inventory by making large orders to suppliers. Suppliers, being unfamiliar with the new owners, may require a 30-day account. Within that period, the account is paid in full and another large order is placed. This is done several times to build credit by the new business operation. Once credit is established, accounting terms are lengthened to 90 days. Suppliers now confidently supply whatever it is they supply and the purchasers sell the stock at a reduced price, pocketing the money and not paying the supplier. During the legitimate operation, the operators of the business have made their normal profit; during the second phase, they have made a tremendous profit from the sale of goods because they have gotten those goods free. A fire where this operation has been going on will be directed at the warehouse facility and the books. Sometimes these individuals say they have a warehouse full of articles for insurance purposes. On the other hand, they indicate a much costlier item than what is actually there. Anchor Hocking bar glasses represented as crystal glass sets, etc.

Skim Operations

Most common skim operations in the service industry involve cocktail lounges, bars, motels, and restaurants. Very close to the planned bankruptcy except that the operator of the business will re-open after the fire free and clear of debts incurred during his skim operations. These individuals change employees regularly. No one knows what is happening and, most often, bookkeepers change at least twice a year. Toward the end, the operation will be on a cash-only basis with suppliers, and behind in its payments for supplies, taxes, rent, utilities, etc. The fire will provide the cash to re-open with a clean slate. Skim operations usually end with an arson fire.

Quit Claim Deed

The quick claim deed is often used by loan-sharking operations. Anytime one of these individuals shows up as the property owner after a fire, suspect involvement of organized crime. Mr. "A" loans Mr. "B" $100,000 to help Mr. "B" with some business financial problems. Mr. "A" is aware that the money loaned will not cover the problem and Mr. "B" will not be able to pay it back. Mr. "A" wants collateral for his loan so he has Mr. "B" give him a quit claim deed to his home valued at $200,000. Mr. "B" cannot repay the loan and Mr. "A" convinces him to burn his home and collect the insurance. The idea being, as explained by Mr. "A": "A" will get his $100,000 back and "B" will have $100,000 left over. "B" agrees and home burns. Mr. "A" files the quit claim deed and gets the entire $200,000. "B" will not usually complain because if he does he may also go to jail.

It is difficult to put on paper the various methods of insurance fraud. The frauds used are only limited by the individual's imagination and business ability. The investigator should understand that the only reason arson frauds are occurring is that few are being properly investigated. Fraud investigations

can be long and difficult; they require time and commitment by the investigator. There is within a short period of time, however, much for the average investigator to learn about an arson fraud investigation. He or she does not have to be an accountant or businessperson to identify fraud situations and the responsible individuals. The investigator, however, must be committed. In some fraud cases, it may appear on the surface that the insured lost money because of the fire (underinsured). A thorough background investigation might indicate the insured had a "cash flow" problem and would have suffered greater losses had the fire not occurred.

CRIME CONCEALMENT

Fires are sometimes set to cover a criminal act, including signs of theft, pilferage, burglary, embezzlement, fraud, or even murder. Many people believe that a fire destroys all the evidence left behind during the commission of another crime. Fire will damage and distort the crime scene, however, much evidence is left for the trained and observant investigator.

A murderer may use arson in an attempt to destroy incriminating evidence or hide the fact that a murder has been committed. In such cases, the act of arson is usually an afterthought, poorly executed and quickly detected. However, when the fire itself is the murder weapon, the details may be carefully planned, then the crime may be difficult to uncover. The hope is that the fire and fire fighting operations will be so confusing that the crime will go undiscovered. Conversely, a theft or "break-in" is sometimes used.

In such cases the manner of preparation and ignition are usually afterthoughts to the main criminal activity. Sophisticated devices are rare and accelerant used, if any, are usually those incidental to the scene. Lack of complete ignition, absence of proper fuel or ventilation, or a general appearance of things "out of place" are diagnostic signs associated with this kind of fire. When fuels are moved about to ensure destruction, they are usually the ones involved in the theft...racks of clothing, boxes of stock, or drawers of financial records are positioned with the intent of providing the highest destruction in their immediate vicinity.

EXTREMIST

Fires may be set during riots, as one of several forms of group violence. They may also be set covertly by fanatical members of otherwise peaceful groups. For example, a polluting chemical plant may become the arson target of ecological fanatics; or an unyielding employer involved in union contract negotiations could be the target of angry workers.

Racism and hate crimes have led to arson directed against members of minority racial, religious, and ethnic groups. Usually, the arson is not subtle, because its goal is to create fear. However, the arsonists do not want to be identified as individuals, and they take great pains to mask their identity. This is another motive where the target of the arson may give some insight into "why" the fire was set.

Messages in the form of graffiti or pamphlets may be left at the scene by the offenders. Large amounts of flammable liquids may be present as well as unexploded devices. Investigators should keep in mind that during times of civil disturbance owners and occupants might take advantage of the situation to ignite their own fire with the hope that it will be blamed on the rioters.

The 1990s have brought a rise in nationalism leading to extremism by some groups. The independence of numerous small nations has led to the use of arson to attack and retaliate against those perceived as enemies of their country. Other society events have turned to the realm of arson, the "anti" versus "pro" abortion groups are another example of the extremes encountered in fire investigation. When an arson fire occurs at an abortion clinic, every effort should be made to notify authorities in surrounding communities. Several arson fires in clinics have occurred within a couple hours driving time between clinics. Gangs also use arson to extort, retaliate, intimidate witnesses, or eliminate competition.

ACTIVITY SHEET 2-1-1

MOTIVES OF THE FIRESETTER

TIME FRAME: 0:10

MATERIALS NEEDED:

- Pen or pencil

INTRODUCTION:

This activity provides the student with the opportunity to identify the probable motive for a fire.

DIRECTIONS: Each student will:

1) Select from Column 2 the most likely motive for the ten situations or conditions in Column 1.

2) Write the corresponding letter for the motive selected next to the item number in Column 1.

	SITUATION/CONDITION
1. _____	A commercial building fire in which all file cabinets were found open.
2. _____	The burning of federal, state, or local government property.
3. _____	A residential fire in which forcible entry occurred before the arrival of fire companies.
4. _____	Fires in businesses with merchandise that is out of style.
5. _____	A closet fire occurring at 1630 hours.
6. _____	Six fires occurring in the same neighborhood within a few minutes of one another.
7. _____	A small, smoky kitchen fire.
8. _____	A bar that was burned using gasoline thrown into the structure via the doorway.
9. _____	A small fire extinguished by the company security guard before the fire department's arrival.
10. _____	The sixth vacant building fire in a week and all within the same general neighborhood.

MOTIVE
A. Profit/fraud
B. Excitement
C. Crime Concealment
D. Revenge/spite
E. Extremist
F. Vandalism

UNIT 3: SCENE EXAMINATION

SCENE SAFETY FOR THE INVESTIGATOR

The investigator works in a potentially hazardous environment that requires the use of personal protective equipment and a continuous awareness of the hazards at the scene. Safety should not be compromised to overcome either discomfort or inconvenience. The same hazards that fire fighters face during fire fighting and overhaul efforts are still a consideration. There are many dangers at a fire scene such as electricity, toxic fumes, water-filled depressions, structural collapse, fire-weakened floors, falling glass, and hazardous dust. In addition, the stresses on the structure are increased by the presence of the weight of the fire fighters, their equipment, water-filled hoses, and trapped water.

The investigator must not forget that the fire scene is potentially a crime scene. As with any crime scene, the investigator must take precautions regarding the activities of the perpetrator of the crime and their accomplices. They may return to the scene to destroy or remove evidence. There may also be time-delay devices that have not yet activated or motion activated devices that have not yet been disturbed.

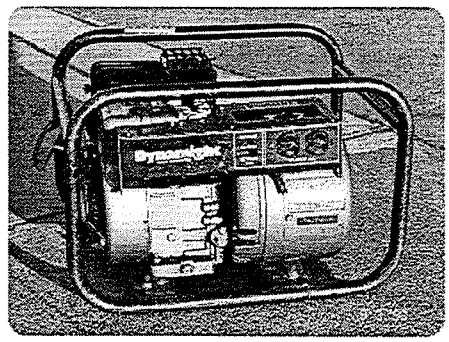
The goal of the investigator should be to conduct a proper investigation in a safe manner. The key to accomplishing this is an approach that recognizes the hazards at the fire scene and taking the appropriate action to mitigate those hazards. Being prepared for these hazards starts with having the proper equipment and using that equipment.

FIRE SCENES ARE DANGEROUS PLACES

Structures

Structural collapse is a very strong possibility. Wood beams, posts, and joists may have been compromised by flame and heat impingement. Structural steel will also fail if not properly protected or treated. Brick and masonry walls may have become weakened due to the destructive effects of heat and subsequent rapid cooling from fire suppression. The roof may have been weakened by burn-through or by the ventilation activities of the fire fighters. Floors can also be compromised. What appears to be a stable surface may actually be an intact top surface with all supporting structures weakened. Surfaces may initially support the investigative team, but repeated use may eventually lead to weakening and failure. Bearing walls may appear to be stable, but are actually moments away from failure.

The live load on the fire building is greatly increased by the addition of water that was used for suppression. Water is retained by the configuration of the building as well as being absorbed by furniture and carpet. The weight of the fire fighters also adds to the live load. In addition, fire fighting activities cause personnel to be in areas where that load would not normally be anticipated such as roofs, attic



spaces, and structural voids. Ladders placed against bearing walls as well as partition walls can develop stress that will lead to wall failure. Generators, forcible entry tools, water-filled hoses, and breathing apparatus are all examples of fire department equipment that add to the load and stress on a fire weakened structure. When appropriate, a decision must be made to remove or change the positioning of these stress-producing loads to minimize the possibility of structural failure.

HAZARDS ASSOCIATED WITH UTILITIES

Electricity

Properly installed electrical circuits and service is designed to provide a safe environment. The destructive forces of the fire can alter the protection that is normally associated with circuit overload devices or grounding features. Insulation is degraded and energized wires may come in contact with other conductors creating shock potential where it would not normally be expected. Wall and floor collapse can also expose and move electrical wiring. Telephone wires and television cable may become energized through direct contact with electrical circuits. Standing water and damp surfaces can become electrical shock hazards if energized by fallen or damaged wires. Metal frames and metal components of furniture, doors, and windows can also be energized and should be treated with caution. Plumbing fixtures and metal wall studs are also potential hazards due to contact with live wires. All wires should be treated as energized until confirmation is received that the electricity has been disconnected at the branch circuit, main service, pole, vault, or street service; whatever is appropriate for the associated damage. Even when the electricity has been disconnected at the conventional sites, be aware that improperly installed circuits, by-passed meters and electricity tapped from a neighboring residence can still cause circuits in the structure to be energized. Emergency or portable generators in remote areas of a building or complex can also supply electricity to a circuit that was assumed to be disconnected.

An investigator should not only visually confirm that the electricity has been disconnected but should also use a circuit test light to confirm the absence of an energized circuit. From an investigative viewpoint, the electrical circuit may need to be evaluated as a potential ignition source, so any disruption whether intentionally for safety purposes or destructively due to the removal of debris should be documented.

The disconnection of electrical wires, meters, vaults, and transformers should be done by utility company personnel only. Power should be shut off at a point remote from any potential explosive atmosphere.

Gas

Properly installed natural gas and liquefied petroleum gas (LPG) supply lines can be damaged by wall and floor collapse as well as by fire suppression activities. The gas should be shutoff at its source into the structure. Residual gas in the supply lines even after shut down presents a minor hazard. Depending on the extent of damage, merely shutting off the gas at an appliance may not be appropriate. The diffuse vapor from these gas sources present an explosion potential when the vapor concentration is within the flammable limits.

When a gas meter is removed or gas is shut off at the source into the structure, investigative techniques require documentation in the event that the gas supply system must be evaluated for its contribution to the initial ignition or support of fire spread. This documentation and examination is also required of suspected appliances that are shut down or disconnected for safety considerations.

Water

As soon as possible, water should be shut off into the structure. Broken water pipes caused by structural damage may contribute to a flooding problem in recessed areas. The uncontrolled flowing water also contributes to the load on the structure and should be stopped to prevent additional structural collapse. Water flowing through activated sprinkler heads also adds to the load and should be shut off as soon as the fire is extinguished and there is no threat of rekindle.

HAZARDS ASSOCIATED WITH CRIMINAL ACTIVITY

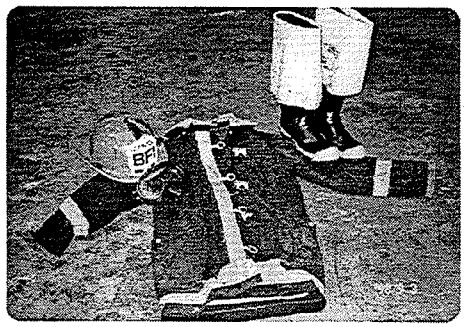
As with any crime scene, the perpetrator may take steps to thwart the discovery of the crime or to destroy evidence. Traps and anti-personnel devices have been found at fire scenes. The criminal may cut holes in floors to injure fire fighters with the intent to delay suppression. Booby-traps using flammable liquids may be placed throughout the structure to accomplish the same type of diversion. The investigator must be aware that these types of hazards may still be in the structure and undiscovered. Incendiary and destructive devices may have malfunctioned and are still capable of causing damage or injuries.

Secondary explosive devices designed to injure responding emergency personnel to the original incident may be on or near the premises. They can be time, motion, or demand activated. If a device is observed or discovered by fire suppression personnel or the investigator, it is obvious that the appropriate protocol should be followed. Do not attempt to move the device or change the environment around it. Take appropriate cover and request the assistance of a bomb squad or bomb technician to render it safe.

Criminal activity associated with clandestine drug labs may involve the presence of chemicals that would not normally be associated with the occupancy involved at the fire incident. If there were indications that drug-manufacturing activity is taking place, the appropriate response would be to treat the scene as a hazardous material incident and mitigate the hazard before continuing the investigation.

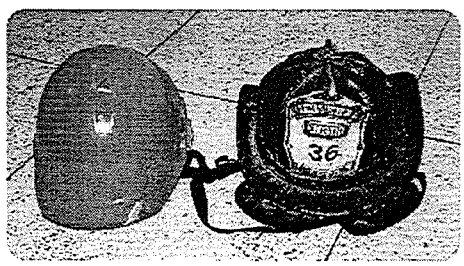
EQUIPMENT

Protective Clothing



The investigator should come to the fire scene prepared to deal with the simplest of safety problems by having protective clothing, helmet, boots, eye protection, gloves, and respiratory protection. Protective clothing can be as simple as coveralls or might include turnout clothing. If properly trained to work in a hazardous material exposure, then the appropriate synthetic fiber suit must be worn. All clothing needs to be decontaminated or properly cleaned after use. If cleaning and decontamination is not possible, then the clothing must be disposed of properly. This is not only done for personal safety, but also to prevent cross contamination of other equipment, vehicles, workstations, and future investigative sites.

Helmet



A helmet or appropriate hardhat must be worn to prevent injuries from falling material at the scene. A helmet with face shield is preferred. The helmet should be rated to withstand penetration.

Boots

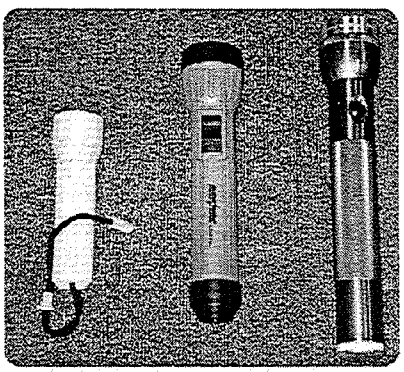
Leather boots or turnout boots with sole plates to prevent penetration injuries should be used. The boots should have safety toes to prevent crushing injuries. As with protective clothing, the boots should be cleaned or decontaminated after use. In the interest of proper investigative techniques, boots might have to be cleaned several times at the scene to avoid transferring trace flammable or combustible liquid residue from one area to another.

Eye Protection

Goggles, safety glasses, or a face shield should be used to prevent eye injuries. Some helmets may have eye protection incorporated into their design.

Gloves

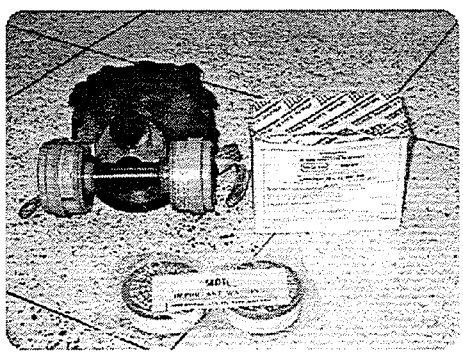
Gloves must be worn to protect the hands from injuries. During the course of the investigation, different types of gloves might be used depending on the circumstances. Leather gloves are used for moving debris. Gloves should fit properly and allow for dexterity. They are used to prevent penetration injuries from sharp edges and glass. Heavy rubber gloves should be used to reduce chemical exposures. Latex gloves must be utilized when handling fluids, handling or packaging evidence, and when there is a possibility of coming in contact with bodily fluids while examining victims. When handling evidence, latex gloves must be changed when appropriate to avoid cross contamination of samples.



Flashlight

A flashlight should be part of the investigator's safety equipment inventory. The light should be rated for use in an explosive environment. In addition, a second smaller light should be carried by the investigator as an emergency light source.

Respiratory Protection



Dusts such as asbestos, plaster, or carbon are present at every fire scene. When dry, these airborne dusts present a significant inhalation and respiratory hazard. Respiratory protection can be provided by using a simple disposable paper single membrane mask at dry scenes where there is a risk of dust inhalation or exposure to airborne pathogens. Mask type respirators with cartridge filters that are appropriate for the involved atmosphere should be used when minor amounts of toxic fumes or irritants are present. If there is any doubt about the safety of the atmosphere, testing should be done to determine what toxic vapors are present. If the area cannot be adequately ventilated, then self-contained breathing apparatus (SCBA) must be used. If an investigator is going to utilize SCBA, they must be properly trained and

maintain their skills through frequent training. Whenever SCBA is used, a similarly equipped partner must be with the investigator.

Pass Device

Personal alert safety systems (PASS) devices are designed to assist rescuers in locating emergency personnel who are down. Investigators entering a hazardous area should wear a PASS device and work in pairs. Radio communication is essential when in that environment.

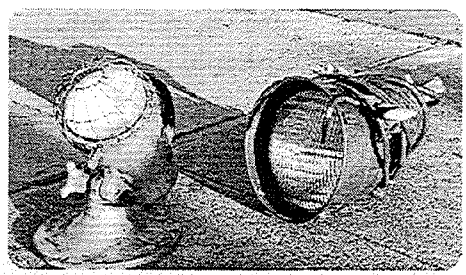
First Aid

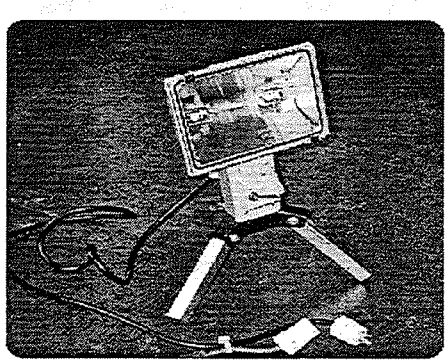
The potential for injury is present at any fire scene. The investigator is sometimes on the scene after emergency medical personnel have left. In the event of a minor or possible severe injury, the investigator must have basic first aid equipment for treatment until advanced support can be summoned.

INVESTIGATIVE EQUIPMENT

Portable Lighting

Auxiliary lighting provides for efficiency and safety at the fireground. Some departments use floodlight units to provide lighting. These units are beneficial but can be of limited use inside the structure. Portable lights whether powered by generators or batteries provide a more versatile illumination source. Power cords should be properly insulated. Highly visible cords such as yellow or orange should be used to eliminate tripping hazards. Portable lights and cords should be placed with due consideration for overhaul and debris removal. If lights are placed at an elevation in a work area, they should be on a stable surface or properly secured.

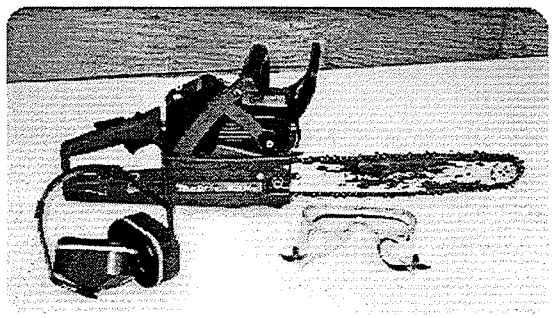




Ladders

Ladders used at the scene should be of the appropriate size and rating. They should be placed on a secure and level area. When placed against walls, be aware that a wall that appears to be intact may have been compromised and is close to failure. Use caution when moving ladders to avoid dislodging unstable fire debris.

Power Tools

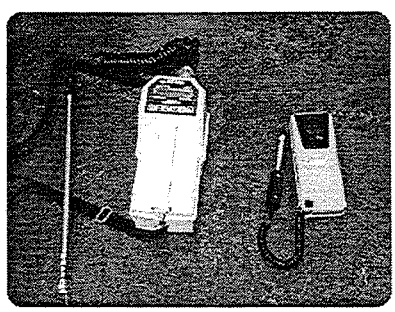


Use the correct tool for the job. The tool should be used properly. The investigator must be trained and have practiced with the equipment. The fireground should not be the place to first use the tool. Power tools should be grounded or battery powered. If using a gasoline fueled tool such as a chainsaw or utility saw, then refill only when the tool is off. Refueling should take place outside the structure in a well-ventilated area. Do not refill in an area where personnel may walk through spilled fuel. If they walk into the structure, they can contaminate the investigative scene by introducing the trace fuel on their boots. When using gasoline-fueled equipment in a confined area, be cognizant that carbon monoxide may accumulate and become a safety hazard. In addition, the exhaust can contaminate the investigative scene and give the impression that a flammable or combustible liquid was present. While using power tools, appropriate hearing protection must be worn.

Shoring/Bracing Material

The preliminary scene assessment should include a survey of the hazards that are present. Some of these hazards have to be controlled before a more detailed scene investigation can be conducted. Regarding structure stability, unsupported walls may have to be shored or braced. In some cases, partial demolition may have to occur to mitigate the hazards posed by roofs, floors, and ceilings. The assessment should be carried out with the assistance of the fire department safety officer, a county or city public works official or building engineer and an experienced demolition contractor. Consideration must also be given to pumping out standing water and removing unstable glass window panels from upper floors. Shoring and bracing material must be of adequate dimensions to be effective for the load they will support.

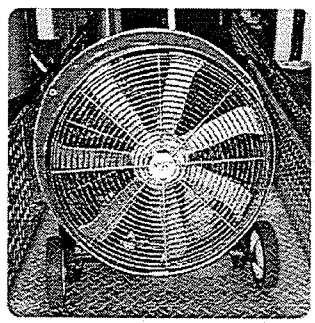
Monitoring Devices



Monitors for testing atmospheric conditions are available and should be used before allowing investigative personnel into an area where the atmosphere may be toxic or oxygen deficient. Devices can monitor combustible gas, oxygen deficiency, toxic gas, and carbon monoxide. With the information provided by these devices, the

investigator can determine the appropriate protective clothing and respiratory protection needed for the scene.

Ventilation Equipment



In some circumstances, the natural ventilation provided by doors, windows, shafts, and staircases is not sufficient to provide a safe atmosphere. In addition to ventilation openings made during suppression activities, ventilation fans might be required. Positive-pressure ventilation is a forced ventilation technique that creates pressure differentials. High volume fans are used to create a higher pressure in the building than outside. The smoke and toxic gases are expelled from the building as they are driven to the lower pressure area. Ventilation fans can be used at a local level to help clear the investigative area. Fans should be secured and located so not to hinder overhaul or the investigation process.

Safety Line

Under extreme circumstances, the investigator might work at a height where a safety line or safety net may be required. While working at an unsecured or possible unstable elevation, all appropriate safeguards should be utilized. The investigator should only use this equipment if they have been properly trained.

Hand Tools

The examination of the fire scene requires a systematic examination of the fire debris. Hand tools that are used for this process should be undamaged. They should be inspected on a weekly basis and examined after each use. The tool head should be firmly attached to the handle. When collecting suspected accelerant debris, tools must be cleaned after obtaining each sample. The Bureau of Alcohol, Tobacco and Firearms (BATF) recommends "Dawn" liquid dishwashing soap. Any citrus-based cleanser is an acceptable alternative.

Decontamination Supplies

The potential exists that toxins and irritants from the scene can be transferred to vehicles, clean clothing, and remote work sites. To avoid this type of contamination, the investigator must clean as much of their protective equipment and tools as possible at the scene. Water should be available at an appropriate site to flush clothing and equipment. The degree of cleansing will be dependent upon the nature of the contamination. Plastic bags should be used to secure soiled clothing. Tools might need to be secured in paper bags or wrapped until they can be completely cleaned. Spare clothing should be

available to replace clothing that has been contaminated. Disposable latex gloves should be used for protection during this process.

PROCEDURES TO FOLLOW

Approaching the Scene

In Route

Scene safety at a fire incident starts with a proper frame of mind before arriving at the location. If the investigator is responding while the fire emergency is in progress, other emergency vehicles are also in route. Be aware of the other vehicle's response route; routes may intersect. Other vehicles may be responding with red lights and sirens and may not see or hear each other. There is a possibility that other crimes may be in progress during the fire. Police personnel will be responding to multiple locations. The original fire may have been set as a diversion. There could be other simultaneous fires in the area because of civil unrest or a serial arsonist. Other fire apparatus could be responding to these scenes and their course of travel could intersect the investigator's route

Ambulances might be leaving the fire scene with victims destined for advanced medical care. Civilian motorists in the area of the fire may be distracted. Their movement may be erratic or unpredictable.

Position of Investigator's Vehicle

The investigator's vehicle should be parked at a sufficient distance to not interfere with the fire suppression if that activity is still being conducted. The vehicle should be close enough to the scene so that the investigator can have reasonable access to investigative equipment. Enough room should be provided so fire fighters can access tools, ladders, and hose lines on their vehicles. Apparatus may have to reposition to perform a rescue. Anticipate that additional responding fire equipment will need access. Routes must be left clear to allow ambulances and paramedic units' access and egress.

The vehicle should be positioned away from areas where the fire has a potential to spread. Park upwind and out of the smoke and fire gas zone. Access should be made available to hydrants and do not park under electrical wires that may be weakened by fire impingement. Be aware of downed wires. Anticipate structure collapse zones and avoid those locations.

INCIDENT COMMANDER

The investigator must meet with the incident commander. Information concerning the status of suppression activities and the effectiveness of operations is very important. The incident commander can inform the investigator about which areas of the structure are safe to enter. The condition of the roofs,

walls, and ceiling can be discussed. The investigator must be made aware of where operations are actively being conducted and how the fire department gained entry into the structure. If overhaul is being conducted, a decision must be made whether it is impacting the possible area of origin and whether it is compromising any future investigative procedures.

The incident commander may have information regarding a possible area of origin and if any evidence of an incendiary fire was present. If any injuries have occurred, the investigator needs to know whether fire fighters or civilians were involved and if they are still on the scene. They may have been transported to a hospital or may be at a medical staging area remote from the structure. If fatalities have occurred, information concerning the circumstances of their discovery as well as their current location is important.

Scene safety for the investigator also includes knowledge of what fire protection equipment or fire detection equipment is being used and is still operational. The status of the sprinkler system needs to be determined. If the heating, ventilation, or air conditioning (HVAC) systems have been utilized to assist with exhausting smoke on controlling air movement, this must also be discussed.

If the investigator is going to enter a structure before the fire is completely extinguished, they should coordinate this with the incident commander. They must determine if the fire is contained to a certain area. They must confirm if there are any areas of collapse or imminent failure in the structure. The investigator should also coordinate their activities with fire suppression personnel and keep the incident commander advised of the areas where they will be working if the investigator is going to move into other areas of the structure. They should never enter a burning building unless they are accompanied by fire suppression personnel or a partner. All appropriate protective gear should be worn when entering the fire building.

After the fire is extinguished, the investigator should be wary of the possibility of a rekindle. With this in mind, egress routes should be preplanned in the event there is a need to evacuate the structure.

HAZARDOUS MATERIALS

Nationally recognized standards indicate that an investigator should be trained to the Hazardous Materials First Responder Awareness Level. Training at this level requires the investigator be able to identify hazardous materials, UN/NA identification numbers, and NFPA 704 markings and understand the significance of their colors and special symbols. If an investigator should encounter these symbols while conducting their investigation, they must take the appropriate action.

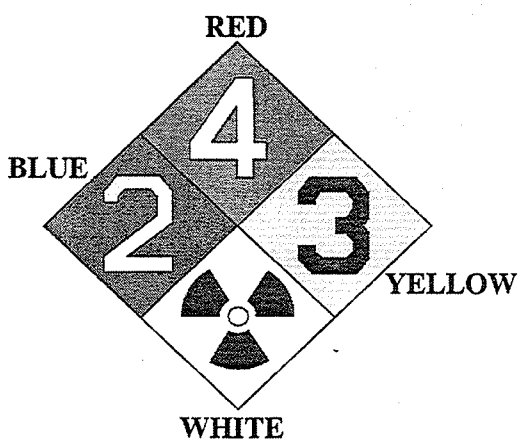


TABLE 2.3
NFPA 704 Rating System

Identification of Health Hazard		Identification of Flammability		Identification of Reactivity	
Type of Possible Injury		Susceptibility of Materials to Burning		Susceptibility to Release of Energy	
Signal		Signal		Signal	
4	Materials that on very short exposure could cause death or major injury.	4	Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature, or that are readily dispersed in air and that will burn readily.	4	Materials that in themselves are readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures.
3	Materials that on short exposure could cause serious temporary or residual injury.	3	Liquids and solids that can be ignited under almost all ambient temperature conditions.	3	Materials that in themselves are capable of detonation or explosive decomposition or reaction but require a strong initiating source or which must be heated under confinement before initiation or which react explosively with water.
2	Materials that on intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury.	2	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.	2	Materials that rapidly undergo violent chemical change at elevated temperatures and pressures or which react violently with water or which may form explosive mixtures with water.
1	Materials that on exposure would cause irritation but only minor residual injury.	1	Materials that must be preheated before ignition can occur.	1	Materials that in themselves are normally stable, but which can become unstable at elevated temperatures and pressures.
0	Materials that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.	0	Materials that will not burn.	0	Materials that in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.
BLUE		RED		YELLOW	

ASSISTANCE AT THE SCENE

Investigative Team

Fire scene investigation should not be done alone. A minimum of two people should be present to ensure that assistance is available if an investigator should become trapped or injured. In the event that the investigation must be done alone, then the investigator must not only inform their supervisor, but also contact their communications center. A check-in system on a regular basis with them can be established. If a contact is missed, then they will know the location of the investigator and send assistance if it is warranted.

Communications

The investigator should carry a radio that will allow them to not only contact the fireground incident commander but also provide a link to the communications center. They should always have the radio when they are at the fire scene. A cell phone should also be carried as a back-up communication resource. In the event that fireground channels become overloaded, the phone can serve as method to contact the communication center or other emergency providers for assistance. The phone can also be used in the event of radio failure at the fire scene.

Incident Commander

Movement throughout the scene and the structure should be coordinated through the incident commander (IC). The IC should be made aware of where the investigators will be working. If the investigators need additional resources or personnel, then requests should be made to the IC. Personnel might be needed to assist with debris removal or overhaul. The assistance of other agencies or personnel from utility companies might be needed at the scene.

Entering a Burning Building

Protective equipment must be worn and SCBA is mandatory for respiratory protection. Investigators must be accompanied by suppression personnel. Egress routes must be known and through contact with the incident commander, the status of the fire can be monitored. If the fire has been extinguished, be aware of the possibility of a rekindle. Hose lines should be left in place until the rekindle potential has been mitigated.

Utility Hazards

Electric power should be shut off to the building. If necessary, it must be cut at the pole, vault, or street service by power utility personnel. Gas also should be shut off. The investigator may have to confirm that gas flow has stopped coming into the building. If a meter is removed to effect the shut off,

then the fire department should maintain control of it until it has been evaluated for its possible involvement in fire spread. Water should be shut off to limit any additional water damage to contents as the result of broken pipes or fixtures. Shutting off the water decreases the potential load on a fire-weakened structure.

PERSONAL SECURITY

Assessing Other Scene Hazards

Crime Scene

It is not readily apparent that when a fire scene is first approached that it could be a crime scene. If the investigator treats the incident as though it were a crime scene, then evidence will be processed properly and indications of a crime might be revealed. The fire itself may be the crime if it was intentionally set, or perhaps the fire was set to cover another crime such as a homicide or a burglary. In any event, the perpetrator may still be on the scene or might return to the scene. Accomplices may also be present. The police should be summoned to provide assistance. The investigator should have rudimentary training in performing physical restraint in the event they are confronted by the criminal. If the investigator is a peace officer and authorized to carry a weapon, they should carry it as well as handcuffs on their person.

Animals

The investigator might encounter household pets during their examination of the fire scene. Normally docile pets may become aggressive when their environment has been invaded by the personnel needed to extinguish the fire. Exercise caution around these animals. In addition, exotic pets such as snakes and other reptiles may be on the scene. In either case, animal control officers should be called to the incident for assistance.

Infectious Diseases

Body fluid exposure protection should be used whenever there is the potential of body fluids being present. Infectious materials, bandages, and hypodermic needles might be in the fire debris. When handling bodies and victims at the scene, precautions should be used to prevent exposure to human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), and hepatitis. Broken waste lines due to wall and floor collapse can cause sewer contents such as fecal material to mix with fire debris. Use proper decontamination procedures and document any possible exposure in the event that follow-up medical care is required.

Hazardous Materials

Proper hazardous materials awareness training will prepare the investigator to recognize potential problems. The investigator must be familiar with the NFPA 704 system for the identification of the hazards of materials. In addition, the investigator must utilize extreme caution until the hazards associated with illicit drug labs have been mitigated by properly trained personnel.

Electrical Systems

Precautions concerning electrical systems in the fire structure cannot be over emphasized. A quick review of the hazards and precautions:

- There are electrical hazards associated with current flow and improper grounding.
- Assume wires are energized
- Personally verify that power has been disconnected.
- Fallen wires may energize an area.
- Use caution when using ladders near wires.
- Only power company personnel can disconnect the power at the pole, vault, or street.
- Exercise caution when walking through standing water.
- More than one electrical source may provide service to the building.
- Nonconforming wiring installation may bypass over current protection devices or the meter.
- There may be extension cords from neighboring buildings providing power.

Investigator Fatigue

The investigator may be at the scene for several hours performing demanding physical work. Fatigue may set in and adversely affect their performance. Accidents can occur when the investigator is unable to concentrate fully on the task. Periodic rest breaks should be taken. The investigator should get proper nourishment. It is also important to replace lost fluids. The best method to rehydrate is by drinking water.

Wildland Fires

The investigation of wildland fires takes the investigator into an environment that is quite different from a structure fire, but there are also precautions that must be taken for scene safety. Be aware of heavy equipment and aircraft that may be working in the area. Animals and reptiles may become quite protective if they are approached after the trauma of a fire. Rocks and fallen trees on up-slopes may become unstable and roll down toward the investigator. Investigators should be aware if they are susceptible to poison oak and avoid direct contact or inhaling its smoke. A sudden wind shift could change the direction of the fire. Know what the fire is doing at all times. This may require the posting of a lookout.

Vehicle Fires

Hazards at vehicle fire incidents also must be recognized in order to provide for scene safety. There may be a significant fuel load if there is fuel in the tank. The tank may fail due to fire impingement. Shocks and struts may become over-pressurized during the fire and fail without warning. They can become projectiles. Battery acid may be exposed and it is quite corrosive. Gloves must be worn to minimize exposure to sharp edges and broken glass. Newer vehicles are equipped with a supplemental restraint system (air bags) in the dash, doors, and head rests that may not have deployed or been deactivated. Be aware that these air bags may deploy during the investigation. Secure the vehicle from moving to avoid shifting while the vehicle is being examined. The parking brake or driveshaft may have been damaged. This could allow a vehicle on uneven ground to shift or roll.

Safety Considerations for Bystanders

Scene safety is not just a consideration for emergency personnel, but also for civilians at the incident. They should be excluded from the fireground and incident building to avoid injury and to allow fire suppression operations to be conducted unhindered. During the investigation, they should be excluded for the same reasons. In addition, they should be excluded so that there is no contamination of evidence at the scene.

When it is safe and the potential crime scene will not be compromised, they should only be allowed back into a building under certain conditions. During the investigation, they might be needed to provide information concerning the prefire condition of a room or building. Sometimes that is best done by bringing them directly into the involved area. They should be properly identified and their relationship with the involved premises should be verified (owner, occupant, or manager). They should be escorted, while on the fire scene or in the building by fire department personnel. Their entry into the building must be coordinated by the incident commander. If appropriate, they must be given personal protective equipment.

The most appropriate manner to provide a safe scene for civilians is to establish a perimeter around the incident. The perimeter should be outside the operations area and in most cases should be maintained by police personnel. An area should be established for the media. Sometimes all that is needed to establish the perimeter is high-visibility yellow police scene or fire scene tape. This establishes a boundary and is readily recognizable to the public. At larger incidents, barricades and vehicles can be used to demarcate the boundaries of the perimeter.

UNIT 3: SCENE EXAMINATION

POST-BLAST INVESTIGATION

INTRODUCTION

With the continued criminal use of bombs and explosives, the potential for fire investigators to be involved in post-blast investigations is ever present.

The first investigator at the scene of many explosions will be a fire investigator. Often it will be difficult to rapidly distinguish whether the explosion resulted in a fire or the fire caused the explosion. Additionally, it will often require considerable scene examination to determine if the explosion was caused by a bombing, or is the result of accidental circumstances such as a natural gas leak, dust explosion, etc.

The methodology used to conduct the scene investigation of fires and explosions is very similar. However, there are additional safety considerations that are unique to the explosion scene. It is imperative that the fire investigator who is dispatched to a suspected explosion scene avails themselves of all available technical resources; foremost amongst these is the Bomb Technician. Civilian Public Safety Bomb Technicians are specifically trained in the safe handling, dismantling, and disposal of bombs and explosives. Although many bomb technicians are trained investigators, it is not necessary for post-blast investigators to be trained bomb technicians. Nonbomb technician investigators should never attempt to handle any bomb or explosive until it has been determined safe by a bomb technician. If no civilian public safety bomb squad is available to respond in a timely manner, the U.S. military has explosive ordnance disposal (EOD) units available to assist civil authorities. The U.S. Army has the responsibility to assist civil agencies above the high tide mark, while the U.S. Navy has this responsibility below the high tide mark. Other branches of the military may assist if directed by the U.S. Army. While military EOD technicians are not law enforcement officers, thus causing potentially serious legal complications, they are much better than untrained officers attempting to handle bombs or explosives by themselves are.

AGENCIES INVOLVED IN POST-BLAST INVESTIGATION

The scene of a bombing, or suspected bombing, will attract attention from numerous agencies, many of which do not routinely interface with the fire service. In addition to local law enforcement, the Investigator can expect to deal with numerous Federal Agencies including the Federal Bureau of Investigation, Bureau of Alcohol, Tobacco & Firearms, and Postal Inspectors.

Although many agencies are available to assist in the mitigation of the emergency, and the subsequent scene investigation, the overall responsibility of Incident Command remains with the original agency having jurisdiction. (Note: there will be certain instances where various Federal law enforcement

agencies will eventually have primary or concurrent investigative jurisdiction, however, this does relieve the original authority having jurisdiction of it's public safety responsibility) It is incumbent upon the Incident Commander to insure that the appropriate personnel and resources are ordered and utilized. Utilization of the Incident Command System will greatly enhance the effectiveness of the post-blast investigation.

As well as multiple levels of law enforcement response (federal, state, and local) a successful post-blast investigation will require the smooth integration of many allied agencies, including: fire service, emergency medical services, Coroner's, public works, and building engineers and inspectors. Other specialty personnel that may be of assistance include explosive canine teams, search & rescue canines, Urban Search & Rescue teams (USAR).

INHERENT DANGERS AT POST-BLAST SCENES

Due to the nature of a an explosion it will also attract large numbers of sightseers, news media, elected officials, and other allied government agency personnel. Early control of the scene is imperative for multiple reasons.

Because of the threat of secondary explosive devices, unexploded explosives, and structural instability, all personnel not directly involved in life-saving operations should be evacuated to a safe-distance until a bomb squad has evaluated the scene. All emergency service personnel operating at the scene of an explosion, or any other location where there is the potential of a bomb being present, should remember the concept of ***Time on Target.*** This means the longer you are in the threat zone, the more likely the bomb will explode and injure or kill you. The recommended initial evacuation distance is 900', under cover, in all directions, remembering that this includes above and below the incident. This is merely a guide and is subject to expansion or contraction based upon the specific threat.

Additional threats to responders and investigators include non-explosive boobytraps, damaged infrastructure (unstable buildings, exposed or downed electrical lines, and broken or leaking gas mains), hazardous materials releases, and biological hazards.

For investigative purposes, the perimeter should be established 1-½ times the distance from the blast seat to the furthest piece of fragmentation located in the initial inspection of the area. (Note: in no case should the safety perimeter noted above be reduced based upon this guideline.) As soon as practical all personnel should be logged in and out of the perimeter. Care should be exercised to avoid cross-contamination of the explosion scene. Much of the evidence at a post-blast scene will be small and easily destroyed, therefore, limiting access will increase the likelihood of being able to identify the device involved and the person responsible.

If a suspicious item is discovered before the arrival of a bomb squad, have the person who discovered it, as well as people familiar with the area, available to brief the bomb technician. Items of

particular interest include location, size, markings, visible ignition systems, odors, colors, and any visible explosives.

IMPROVISED EXPLOSIVE DEVICES

It is important that post-blast investigators understand the methods of initiation of improvised explosive devices so they can conduct through scene investigations. Investigators must remember that the appearance of items such as power sources, switches and containers may be altered substantially as the result of the explosion, however, they will still be present and identifiable.

Methods of initiation include time, action, and command

Time initiation is when the bomb builder initiates a time sequence, at the end of which the bomb explodes. This can be as simple as burning fuse or as complicated as computer programmed timers. Any type of mechanical, electric, or electronic timer can be incorporated into the firing mechanism of an improvised explosive device.

Action initiation is when the bomb is exploded by the action of the victim, weather they are the intended target or just happen upon the device. Action initiated devices can be pressure application, pressure release, tilt switches, trembler switches, proximity switches, photo cells or any other switch which is activated by the actions of the victim which alters the orientation or atmosphere of, or around, the device.

Command initiation is where the bomber watches the device and activates it when a particular target is close to it. Command activation may range from hard wire connection to remote radio control.

Although the methods of initiation are discussed separately, the investigator should always anticipate the possibility of multiple methods of initiation. The reasons for multiple methods of initiation include arming and firing switches; anti-movement switches, and anti render-safe switches.

The post-blast investigator must attempt to locate the remains of the exploded device. These components include the explosive filler, or residues thereof; power sources; switches; and containers.

SCENE INVESTIGATION

The major goal of the scene investigation is to identify all of the components of the explosive device and to reconstruct the chain of circumstances responsible for the initiation of the explosion.

Important observations during blast assessment include the nature of the damage. Is it generalized of localized? Is it a pushing or shattering explosion? Is a blast seat evident? How far is debris scattered and is there a pattern to it?

As noted earlier, a perimeter should be established as soon as possible. A rule of thumb is to set the initial perimeter one and one half times as far as the farthest piece of debris located in the initial scene inspection. (Note: If this is less than the safety perimeter already determined for suspected additional devices, a minimum of 900' behind cover, use the further distance). Always remember that it is easier to collapse a perimeter than it is to expand it later, however, later discoveries of fragmentation may require expansion. The blast's direction may modify the scene perimeter.

When conducting a preliminary search, in addition to personal safety issues, it is imperative that Investigators establish precautions against cross contamination of the scene. This may include cleaning or covering footwear and clothing, as well as cleaning any tools or equipment used (See ATF Guide to Avoiding Cross-Contamination). They should establish a single entry and exit point for accountability of personnel entering the scene and to ensure proper decontamination of personnel and equipment. Additionally, Investigators must determine what specialized personnel and equipment will be needed to safely and efficiently process the scene.

The actual scene search should start at the perimeter and work in toward the blast seat. Potential components of the device should be marked, as they are located. Specific components such as positions of the "firing train" should be plotted and collected individually. Large quantities of like materials (i.e.: pieces of the container) can be collected together.

Processing of the blast seat may require digging and sifting to recover all of the pieces of device components. Sweep and/or swab for explosive powders and explosive residue. Document the size and depth of the blast crater and look for evidence of burning fuse.

QUESTIONS TO BE ANSWERED

1) What was the nature of the explosion?

2) If it was a bombing, what materials were used to construct the device?

3) How was the device constructed?

4) What initiated the device?

5) Who/what was the target of the bombing?

6) Where was the device placed?

7) How did the suspect access and place the device?

8) Who was the victim or intended victim?

EVIDENCE FROM VICTIMS

All victims, alive or dead, may be a source of evidence. Components of the device and explosive residue may be in or on the victim's body and/or clothing. Clothing should be seized and examined for evidence. Full body x-rays should be taken of all deceased victims to assist in the location of evidence.

In addition to physical evidence, the nature of wounds may indicate the relationship of the victim to the bomb at the time it exploded. This may help to establish if the victim was a true victim or a suspect who was inadvertently injured while building or placing the device.

SUMMARY

While similar to fire scene investigation, post-blast explosion investigation is unique and requires some additional considerations by the Fire Investigator. Your safety should remain paramount at all times.

ATF

VEHICLE BOMB
EXPLOSION HAZARD AND EVACUATION DISTANCE TABLES

DEPARTMENT OF THE TREASURY BUREAU OF ALCOHOL, TOBACCO AND FIREARMS

IF YOU SUSPECT UNLAWFUL POSSESSION OR USE OF EXPLOSIVES OR BOMBS
CALL 1-888-ATF-BOMB OR YOUR LOCAL
ATF OFFICE FOR ASSISTANCE

- Minimum evacuation distance is the range at which a life-threatening injury from blast or fragment hazards is unlikely. However, non life-threatening injury or temporary hearing loss may occur.
- Hazard ranges are based on open, level terrain.
- Minimum evacuation distance may be less when explosion is confined within a structure.
- Falling glass hazard range is dependent on line-of-sight from explosion source to window. Hazard is from falling shards of broken glass.
- Metric equivalent values are mathematically calculated.
- Explosion confined within a structure may cause structural collapse or building debris hazards.
- Additional hazards include vehicle debris.

This information was developed with data from the Dipole Might vehicle bomb research program conducted by ATF, with technical assistance from the U.S. Army Corps of Engineers. Goals for Dipole Might include creating a computerized database and protocol for investigating large-scale vehicle bombs. Dipole Might is sponsored by the Technical Support Working Group (TSWG). TSWG is the research and development arm of the National Security Council Interagency-working group on counter terrorism.

VEHICLE BOMB EXPLOSION HAZARD AND EVACUATION DISTANCE TABLES

ATF	VEHICLE DESCRIPTION	MAXIMUM EXPLOSIVES CAPACITY	LETHAL AIR BLAST RANGE	MINIMUM EVACUATION DISTANCE	FALLING GLASS HAZARD
	COMPACT SEDAN	500 Pounds 227 Kilos *(In Trunk)*	100 Feet 30 Meters	1,500 Feet 457 Meters	1,250 Feet 381 Meters
	FULL SIZE SEDAN	1,000 Pounds 455 Kilos *(In Trunk)*			
	PASSENGER VAN OR CARGO VAN	4,000 Pounds 1,818 Kilos	200 Feet 91 Meters	2,750 Feet 838 Meters	2,750 Feet 838 Meters
	SMALL BOX VAN (14 FT BOX)	10,000 Pounds 4,545 Kilos	300 Feet 91 Meters	3,750 Feet 1,143 Meters	3,750 Feet 1,143 Meters
	BOX VAN OR WATER/FUEL TRUCK	30,000 Pounds 19,636 Kilos	450 Feet 137 Meters	6,500 Feet 1,982 Meters	6,500 Feet 1,982 Meters
	SEMI TRAILER	60,000 Pounds 27,273 Kilos	600 Feet 183 Meters	7,000 Feet 2,134 Meters	7,000 Feet 2,134 Meters

ATF

Guidelines for the Prevention of Contamination of Explosives Evidence

Bureau of Alcohol, Tobacco and Firearms Forensic Science Laboratory

Sources of Contamination

Explosives and explosive residues on hands, tools, clothing, and footwear can be carried away from:

- The explosives or the firearms range
- Bomb scenes and warrant scenes
- Any location where bulk explosives are present

To Prevent Contamination, Actual and Alleged

- Package evidence to be tested for explosive residue in vapor tight containers (i.e., cans)
- Wear disposable gloves
- Wear clean clothing and boots or
- Wear Tyvek suits and boot covers
- Use new or disposable tools or
- Use decontaminated tools

Decontamination Procedures

- Scrub tools with soap and water and rinse with alcohol
- Scrub footwear with soap and water and inspect visually
- Machine wash or dry clean clothing

Special Situations

Exposure to bulk explosives (e.g., Range, RSPs)

- Following exposure to bulk explosives, clothing, footwear and tools cannot be effectively decontaminated
- Have two sets of gear, one designated for bulk explosives situations and a second for scenes
- Isolate contaminated gear

If you have any questions regarding the proper decontamination procedures call 1-888-ATF-LABS

Developed from a series of tests conducted in conjunction with the Dipole Might Vehicle Bomb Research Program, a project funded by the Technical Support Working Group (TSWG).

Guidelines for the Prevention of Contamination of Explosives Evidence

Scene Type	Boots	Clothing	Tools Use disposable If possible	Hands	Evidence
Decontamination Procedures					
Post blast -low explosives -pipe bombs	Scrub with soap & water; Inspect . visually	Machine wash or dry-clean	Scrub with soap & water, then rinse with alcohol	Wear disposable gloves	Collect evidence with disposable gloves
Post blast -high explosives	Scrub with soap & water; Inspect visually	Machine wash or dry-clean	Use disposable tools if possible	Wear disposable gloves	Collect evidence with disposable gloves
Contamination Prevention					
Search warrant -low explosives	Wear clean boots or Boot covers	Wear clean clothing or Tyvek Suits	Scrub with soap & water, then rinse with alcohol	Wear disposable gloves	Collect evidence with disposable gloves & change gloves with each exhibit. Package in vapor tight containers
Search warrant -high explosives			Use disposable tools if possible	Wear disposable gloves	
No Effective Decontamination					
Explosives range work -bulk explosives -RSPs	Wear designated "range boots"	Wear designated "range apparel"	Use designated "range tools"	"Range gloves" or disposable gloves	Never package bulk explosives with post-blast or warrant evidence

UNIT 4: EVIDENCE

SCENE PHOTOGRAPHY

Photographs of the fire scene during suppression and investigation should be taken immediately. This is done before sketching, moving, or collecting evidence. Photographs are a means of communication that helps clarify the testimony of the fire expert in court.

Photographing and sketching should be used as the investigator conducts the fire scene investigation. Photographs should be taken throughout the investigator's layer-by-layer examination of the debris. In this fashion, articles of evidence discovered could be shown to the jury in the position in which they were found. Notations can also be made on the rough fire scene sketch as to the locations of such articles of evidence by using dimensional coordinates.

This chapter will give general guidelines to the fire investigator. However, it is recommended that, at some point early in their career, investigators take a basic course in photography to enhance their skills.

ADVANTAGES FOR THE FIRE INVESTIGATOR

Fire investigators that take their own photographs immediately upon arriving at the fire scene are in an enviable position. This is like stopping the clock. It means, in effect, that when the investigator attempts to reconstruct the fire scene at a later date, days, weeks, months, or even years later, they will have the valuable assistance of the photo or a series of photos to refresh their memory or that of a witness. They can prove conclusively as to the appearance of the fire scene at the time the photograph was taken.

This technique also enables the prosecutor to lay proper legal foundation for the photographs as exhibits. To be admitted into evidence, the photographs must fairly and accurately depict the fire scene as the witness viewed it.

Photographic coverage of the fire/arson scene can be accomplished in stages that correspond to the investigator's examination. These photos may later be used by the expert in explaining to the jury how the investigator arrived at the conclusions as to the area of origin, and will help corroborate his or her expert opinion testimony.

PHOTOGRAPHIC PROCEDURE AND TECHNIQUES

The first portion of a fire scene photographed will normally be the exterior of the building, with concentration on pictures of doors, windows, and locking devices. All sides of the structure and roof

must appear in the photos to assist the investigator with testimony about burn, char, smoke, and heat patterns. These pictures will also assist in showing where evidence such as tools, ignition devices, or flammable liquid containers was found. If such evidence is found, it should immediately be photographed before retention as evidence.

During photo coverage of the exterior areas, consideration may be given to taking aerial photos of the building and its surrounding area. This can be of valuable assistance when attempting to show an overall photo of a large structure. When larger fires occur there is often either an aerial ladder truck or a snorkel at the scene. Either apparatus can be used effectively by the fire investigator for a photo platform. In some circumstances, witnesses may have described the direction in which a suspect fled the fire scene. These aerial photos can later be used by that witness in court testimony.

The 35mm camera is a very practical camera for the fire investigator. It is more useful for close-up work. Again, if the 35mm camera is used, it should have interchangeable lenses. If an investigator is restricted to one camera, the 35mm camera is recommended.

More fire scene photos can be readily made with two lenses: a wide-angle lens and a normal angle lens. The wide-angle lens gives a wider field of view and is excellent for interior photography. This lens should be selected to give as little distortion as possible. For 35mm camera, a wide-angle lens with a 28° angle of coverage is ideal for evidence documentation inside of buildings. The normal lens is useful for exterior shots, close-up work, and normal coverage.

AUTOMATIC CAMERAS

The seasoned photographer generally prefers to adjust the camera to the optimum setting for the subject and the conditions. This takes both time and skill. If these are not available, an automatic camera will substitute. The word "automatic" is often a misnomer, many such cameras require matching of needles or other manual adjustment, and others require that one parameter be determined by the operator, e.g., a shutter speed. Most also require a setting of the ASA (ISO) number to match the film speed. Some cameras on the market accomplish all of these things automatically, will use flash if required, not firing it when the light is adequate. This camera type is also quite inexpensive. It could relieve the officer of many small preliminary tasks while making useful photographs certain.

FLASH EQUIPMENT

Flash equipment should consist of a detachable flash unit or strobe light that is reliable and rechargeable. The detachable feature is essential for oblique light photos, as previously described. Other equipment necessary for the fire scene photographer includes a collapsible tripod, reliable light meter, and tape measure. The electronic flash has displaced the flashbulb. These units are not large or cumbersome, and they may be used repeatedly, with occasional replacement or recharge of batteries.

In essentially dark conditions, photoflash units are a good substitute for photoflood lamps or other incandescent sources of light. For interior photography of small or moderate areas, they provide sufficient illumination without usual arrangement. In exterior areas, or in very large enclosure, this may be true, as discussed below.

They are not effective at great distances, interior or exterior, without supplementation. The distance covered with a flashbulb or electronic flash will be determined by the film speed, the output of the light source, and the maximum aperture of the lens used. The distance will be modified by prevailing conditions, primarily due to the reflectivity of surfaces between the light source and the object photographed. It is common to see persons ineffectually using their flash units at parades, in large theaters, and the like because they do not realize the distance limitation of any type of illumination at the camera position.

Comparatively distant objects can be properly photographed only if illuminated, and this will require a source of light close to them. At present, slave lights provide a more acceptable method. A photocell triggers a second flash unit (the slave) by means of the light emitted by the flash on the camera. Such units may be distributed to all parts requiring secondary illumination without the necessity of stringing wire. When using slave lights, it is important to remember that the exposure to be used is the same with or without slave supplement to the flash on the camera, and it remains the same regardless of the number of slave units. The reason for this is that the area illuminated is increased, but the intensity of any point is no greater than the best-illuminated portion with a single flash. The film responds only to intensity, not to total illuminated area. Slave units have not been widely used in police investigation, largely because of a lack of familiarity with the equipment. Numerous commercial units are available, and they can be constructed without great difficulty. They may use either flashbulbs or electronic light source.

Another technique is called "painting" with light. It consists of putting the camera on a tripod, opening the lens, and walking around with an electronic flash firing it at predetermined distances.

On many occasions during fire scene photography, the investigator may wish to highlight or portray certain patterns in more detail. Flammable liquid puddle patterns, spall marks, and degrees of wood char (alligatoring) often are discussed during the expert's testimony in court and can be graphically portrayed to the jury with photographs. To highlight these patterns, the investigator can use a technique that has been found helpful to police criminalists when taking pictures of tire impressions and footprints. The camera is placed on a tripod or held by another individual, and the flash unit is held so that the light is cast obliquely across the subject. Several shots can be made with the light held at different angles.

As the investigator proceeds to the interior of the building, he or she may want to take comparison photos of damage. When the expert is testifying, this will assist the jury in understanding how the investigator arrived at a conclusion about the area of origin.

Photographs should be taken during successive stages of the clearing and search, with particular attention given to details in the area of origin. Both color and black and white film will suffice, since the areas of interest are usually blackened and therefore reflect less light. Underexposure should be avoided. Scenes consisting of black charred wood usually require one or two f/stops more exposure (an increase from two to four times) than that of normal scenes.

If there is doubt as to the correctness of the exposure, the investigator can bracket the exposure. This is done by taking a photo at what is believed to be the correct exposure, and then a second or third photo with the lens opened one f/stop from the normal and closed down one f/stop from the normal. During the fire scene examination, the investigator may wish to portray significant colors, such as those that appear on burned chrome surface or flammable liquid stains like the thin brown ring that may surround flammable liquid patterns. This can best be accomplished by the use of color photography, which will supplement the black and white pictures.

When the investigator has located the point of origin, he or she should carefully photograph the entire area before removing debris. Origin photos are helpful if they cover the walls and ceiling in addition to the debris at the point of origin. In this fashion, significant burn patterns such as fire cones can be readily shown to the jury. During photography of the area of fire origin, sketches should be made to show from what angle the photos have been taken. The sketches also will show that the fire origin has been completely covered with photographs.

Following the debris removal and after the floor has been cleaned, it is customary to photograph burn patterns and protected areas that appear on the floor. Flammable liquid spall patterns can be readily photographed if the floor is carefully washed and allowed to dry. These photos can be taken by utilizing oblique light techniques. After preliminary photos, the flammable liquid patterns can be enhanced by carefully outlining them with white chalk. These patterns can then be photographed again, which will dramatically show the recognizable puddle shape.

As reconstruction of the fire scene progresses, photography should continue. Reconstructed furniture items can be replaced by the locator marks on the floor (unburned or protected areas) and photographed in their positions during fire progress. This is not only important to help explain fire progress, but many times may show rearrangement of items in preparation for the fire. Furniture items should be carefully photographed from several angles to show fire spread. Oftentimes these items will show evidence of a surface or flashover burning which illustrates the effects consistent with a flammable liquid fire.

After all photographic prints have returned from processing, they should be labeled with the date, time, location, case number, photographer's name or initials, and entered in the photo log using the alphabet. Numbers should only be used on evidence items collected at the scene. Next, the prints should be lettered to correspond to a photo diagram of the arson scene to show that all areas were

photographically covered. The most effective print size for courtroom presentation is 20"x30". This size is large enough to show details and can easily be marked by witnesses during their testimony.

VIDEO

Videotapes are excellent for documenting the entire scene, particularly areas that may not have been photographed. The video can be reviewed later to answer questions or concerns. In addition, the video can be converted to graphic animation, on a computer, for court presentation. This presentation can depict fire spread, evidence location, and other important issues. **Caution***: do not record sound as the scene is video taped.*

DIGITAL

Digital cameras have several distinct advantages over film.

- ❖ Limited lighting is needed to capture a picture.
- ❖ Pictures can be easily inserted into case reports to illustrate ideas.
- ❖ Digital pictures can be enlarged without loss of quality or detail.

Investigators should check with the local District Attorney's office to determine their preferences in criminal cases.

UNIT 4: EVIDENCE

EVIDENCE RECOGNITION, DOCUMENTATION, AND PRESERVATION

Recognizing evidence is critical to a successful prosecution of arson. However, if that evidence is not documented and preserved correctly, the evidence collected may not ever be allowed in court.

In every arson case, evidence is either present at the fire scene or on the suspect, depending on the destruction by the fire and suppression. Activity evidence is often destroyed before the fire investigator arrives on scene. That is why it is so important that when evidence is discovered, the court does not reject it because the documentation or preservation was not properly done. Evidence is something that makes another thing clear, plain, or obvious. The role of evidence in a criminal trial is to help prove guilt or indicate innocence.

Evidence can be used to establish a start or sequence of events, establish corpus delicti, connect a suspect to the scene, establish the identity of a victim or suspect, or to establish motive.

TYPES OF EVIDENCE

There are four types of evidence the investigator will handle. The first is direct evidence, which directly proves a fact without any inference or presumption and which, in itself (if true) conclusively establishes that fact.

The second and most common to the fire investigator is circumstantial evidence. This evidence is based on analysis and interpretation of circumstances and facts.

The third type of evidence is testimonial, which is an oral transmission of information. This type of evidence is the most common in criminal trials.

The fourth type is physical evidence that may consist of trace evidence or property. Physical evidence is a tangible "thing" in solid, liquid, or gaseous state, which can be the subject of scientific inspection.

Evidence can play a number of roles in its association to the crime scene or suspect. Associative evidence is physical evidence that, after being examined and tested in a criminalistic laboratory, connects the accused to the crime scene in some manner. An example would be fibers or hairs found at the crime scene and on the accused. Signs of forcible entry on a door agree with eyewitness statements that a person was seen breaking in would be corroborative.

Evidence found to be exclusionary might be fingerprints found at the crime scene but do not match a suspect. Melted furniture and char depth can show the fire's path and area of origin, which allows the investigator to reconstruct the fire scene. Some evidence discovered may lead to many investigative leads and is considered investigative in nature.

All evidence must be relevant and material to the case. If the evidence is testimonial, the witness must be competent. All persons, except the accused must testify unless they are incapable of expressing themselves or incapable of understanding the duty as a witness. The presiding judge determines the ability of a juvenile to be a witness under the age of 14.

Investigations of fires are difficult as evidence is destroyed by the fire's progress, the search for evidence must occur before there is proof of a criminal act and the evidence can be contaminated before being discovered by suppression activity, returning occupants, or even the investigators themselves.

Evidence of an arson fire may also be contaminated or lost just by its exposure to the atmosphere such as a flammable liquid. All indicators of a fire cause are evidence, whether the fire is arson or an accidental cause.

Once something is recognized as evidence, its relation to the fire scene or subject must be documented. All evidence should be photographed before being moved. Photos should be taken of the evidence in relation to the surrounding area as well as close-ups. Some of the close-up photos should have some sort of measurement device near the evidence so that size or distance can be identified. A sketch should also be drawn indicating where the evidence was in relation to the surrounding area. All witnesses who either discovered the evidence or had contact with it should be identified.

Recovering the evidence after a fire has burned it can be tricky. Some evidence is completely reduced to ashes, yet identifiable by sight. Any movement of the evidence, no matter how careful, will destroy its visible form. Some forms of evidence may be so large in size that it is not feasible to move the item. If that occurs then it should be photographed and left in place. Other evidence is very fragile and may be destroyed if it is not properly packaged such as a flammable liquid. If a flammable liquid is not placed in an airtight container, the vapors will evaporate and render the evidence useless. If a piece of evidence is damaged during removal, the reason for the damage should be recorded. Each piece of evidence should be marked. The investigator can place their initials on large pieces of evidence. Small pieces should be placed in a marked container. The investigator must remember where they marked the item.

All pieces of evidence should contain at least the date and time discovered, investigator's name that recovered the item and the incident or fire number the evidence is in reference to. There are many variations of evidence tags, some of which are included in this section. Each investigator should determine what their local district attorney prefers and tag evidence accordingly.

It is extremely important that the chain of custody be identified on each piece of evidence. Most evidence tags have a place for several changes in custody. If the evidence continues to change custody, a separate sheet should be maintained to record each change.

One person should do the collection of the evidence. More than one person may have found the evidence, but only one person should be the collector and signator on the evidence tag. This person would usually be the one who would be responsible for any follow-up investigation and the ultimate filing of the case for prosecution with the district attorney.

There are many types of containers for the collection of evidence. Sometimes just a paper bag or a container you make yourself out of paper is sufficient. The key is that the right container is used for the right evidence. Although it would be rather evident that a paper bag not be used for collecting a flammable liquid, a plastic container may be just as bad but not as obvious.

You should always use new containers. Never re-use a container for evidence, no matter how clean you believe it is. If a good defense attorney learns of the containers previous use, they may be able to make a big enough issue of it that it begins to put some doubt in the juror's minds about the purity of the evidence. Remember that it only takes one juror to lose a case.

Evidence must be stored in a secure location at all times. Your office, where other personnel routinely come and go is not a good location, even though you may have the evidence locked in a cabinet. A separate area, where only the keepers of the evidence have access should be provided. The keepers of evidence should be limited to two or three personnel at most, even though you may have five or more investigators collecting evidence.

Other than embezzled or stolen property, there are no specific laws that outline the disposal of evidence. In a criminal case, evidence is usually retained for a minimum of three to six years, which is the statute of limitation for most arson cases. However, if a death occurred, there is no statute of limitation. If the retained evidence becomes part of a civil action, it will need to be retained for a longer period of time, as most civil suits take a minimum of five to seven years to reach conclusion. If the evidence was used as part of a criminal prosecution, the court may have taken jurisdiction requiring a court order to dispose of the evidence. If there is any question regarding the retention or disposal of evidence, your district attorney should be consulted.

A number of agencies provide laboratory services to law enforcement agencies. Your local police or sheriff departments may provide limited laboratory services. More extensive services are provided by the California Department of Justice (DOJ), FBI, and BATF. DOJ has numerous labs throughout California. Not all provide the same services, but evidence collected can be given to any of the labs and they will forward it to the appropriate facility. DOJ provides two main types of services, latent print identification and laboratory services.

DOJ provides forms for submission of evidence. One is for laboratory examinations and the other is for latent print identification. Both forms are provided in this manual.

Before submitting evidence, the investigator must determine what it is they want the lab to accomplish. If an item is to be tested for latent prints and a laboratory exam is to be performed, the investigator needs to insure the latent print test occurs first as the laboratory exam may destroy the chances of obtaining a latent print. The DOJ laboratories may perform chemical tests, microscopic exam, instrumental tests such as x-rays, and latent fingerprinting.

In addition to these tests, DOJ will also perform polygraphs or voice stress analysis exams. Your local sheriff or police department may also have someone capable of performing these exams. The DOJ also has a questioned document section and personnel available to do photography.

Most cases are made based upon evidence found at the scene or on the suspect. It is the investigator's responsibility to ensure that the evidence found is recovered properly and the chain of custody is retained.

The investigator will find that failure to follow these simple procedures will result in the evidence being disallowed in the court proceeding.

The California DOJ labs are for the use of all investigating agencies. Investigators should become familiar with the labs available in their area and take advantage of the services provided.

FORENSIC SERVICES

The Bureau of Forensic Services maintains a statewide laboratory system to provide timely and effective forensic services to state and local law enforcement agencies, district attorneys, public defenders and courts.

Services

- ❖ Criminalistics Laboratories: Provides complete examination of all types of physical evidence; analyzes and identifies controlled substances; conducts blood alcohol analyses; offer expert testimony in court; and provides assistance where requested to agencies processing crime scenes.

- ❖ Questioned Documents Section: Analyzes, compares, examines, and identifies handwriting, mechanical impressions, and chemical properties of paper, develops evidence; and offers expert testimony in court.

- Latent Print Section: Assists in major crime scene investigations for latent print evidence; provides requesting agencies with reports covering all aspects of examinations, comparisons, and disposition of evidence; and provides expert court testimony.

- Toxicology: Conducts analysis of physiological specimens for common drugs and toxic substances encountered in driving under the influence (DUI) investigations; provides consultation and interpretation of toxicological results; and may conduct toxicological analysis in other than DUI investigations, on special requests.

- California Criminalistics Institute (CCI): Serves the needs of all public criminalistics laboratories in forensic training, information services, law enforcement briefings, and new technological applications.

- DNA Laboratory: Focuses on the potential forensic applications of DNA analysis. Staff conducts research to advance DNA typing, provide analysis to local crime labs, and coordinate the development of statewide standards in forensic DNA analysis.

Inquiries

Inquiries for assistance may be directed to the Department of Justice, Special Forensic Section, or a Regional Criminalistics laboratory in your service area listed below.

ADMINISTRATIVE SUPPORT UNIT
4949 Broadway, Room F-104
Sacramento, CA 95820
(916) 227-3635/CALNET 498-3635
Fax: (916) 227-3619

BLOOD ALCOHOL PROGRAM
4949 Broadway, Room F-249
Sacramento, CA 95820
(916) 227-3635/CALNET 498-3635

CALIFORNIA CRIMINALISTIC INSTITUTE
4949 Broadway, Room A-104
Sacramento, CA 95820
(916) 227-3575/CALNET 498-3575
Fax: (916) 454-5433

DNA LABORATORY
(510) 540-2434

INSTRUMENTAL SUPPORT UNIT
4949 Broadway, Room F-126
Sacramento, CA 95820
(916) 227-3566/CALNET 498-3566

LATENT PRINT PROGRAM
4949 Broadway, Room F-163
Sacramento, CA 95820
(916) 227-3797/CALNET 498-3797

QUESTIONED DOCUMENTS SECTION
4949 Broadway, Room F-147
Sacramento, CA 95820
(916) 227-3623/CALNET 498-3623

TOXICOLOGY LABORATORY
4949 Broadway, Room F-249
Sacramento, CA 95820
(916) 227-3620/CALNET 498-3620

BERKELEY DNA LABORATORY
626 Bancroft Way
Berkeley, CA 94710
(510) 540-2434
Fax: (510) 540-2701

CHICO CRIMINALISTICS LABORATORY
3870 Morrow Lane, Suite A
Chico, CA 95928
(916) 895-5024/CALNET 459-5024
Fax: (916) 895-4657
Counties Served: Butte, Colusa, Glenn, Sierra, Sutter, and Yuba

EUREKA CRIMINALISTICS LABORATORY
1011 West Wabash
Eureka, CA 95501
(707) 445-6682/CALNET 538-6682
Fax: (707) 445-6688
Counties Served: Del Norte, Humboldt, and Mendocino

FREEDOM CRIMINALISTICS LABORATORY
440A Airport Blvd., Bldg. A
Watsonville, CA 95076
(408) 761-7620
Fax: (408) 761-7629
Counties Served: Monterey, San Benito, and Santa Cruz

FRESNO CRIMINALISTICS LABORATORY
6014 North Cedar
Fresno, CA 93710
(209) 278-2982
Fax: (209) 297-3544
Counties Served: Fresno, Inyo, Kings, Madera, Mariposa, Mono, and Tulare

MODESTO CRIMINALISTICS LABORATORY
1108 W. Main
Ripon, CA 95366
(209) 599-9449
Fax: (209) 599-3550
Counties Served: Merced, Stanislaus, Tuolumne

REDDING CRIMINALISTICS LABORATORY
11745 Old Oregon Trail
Redding, CA 96603
(916) 225-2830/CALNET 442-2830
Fax: (916) 241-8409
Counties Served: Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama, and Trinity

RIVERSIDE CRIMINALISTICS LABORATORY
1500 Castellano Road
Riverside, CA 92509
(909) 782-4170/CALNET 632-4170
Fax: (909) 782-4128
Counties Served: Imperial, Riverside

SACRAMENTO CRIMINALISTICS LABORATORY
4949 Broadway, Room F-201
Sacramento, CA 95820
(916) 227-3777/CALNET 498-3777
Fax: (916) 227-3776
Counties Served: Alpine, Amador, El Dorado, Nevada, Placer, Solano, Yolo

SANTA BARBARA CRIMINALISTICS LABORATORY
820 Botello Road
Goleta, CA 93117
(805) 681-2580/CALNET 728-7747
Fax: (805) 964-1034
Counties Served: San Luis Obispo, Santa Barbara

SANTA ROSA CRIMINALISTICS LABORATORY
7505 Sonoma Highway
Santa Rosa, CA 95409
(707) 576-2415/CALNET 590-2415
Fax: (707) 576-2141
Counties Served: Lake, Marin, Napa, Sonoma

STOCKTON CRIMINALISTICS LABORATORY
1001 West Mathews Road
French Camp, CA 95231
(209) 948-7554
Fax: (209) 948-7714
Counties Served: Calaveras, San Joaquin

ORGANIZED CRIME ANALYSIS

The Organized Crime Unit works to eliminate organized criminal activity in California by coordinating statewide efforts against organized crime.

Services

- Gathers, analyzes, and disseminates criminal intelligence regarding traditional organized crime in California. Traditional organized crime includes illegal gambling, loansharking, labor racketeering, gangland murders, and organized crime infiltration of business and pornography. La Cosa Nostra figures and their associates are also monitored.

- Prepares and disseminates in-depth reports on the scope, patterns, and structure of organized crime.

- Assists local, state, and federal agencies in special project such as link analysis diagrams, telephone toll analysis, event flow diagrams, encompassing charting, report preparations, and task forces.

- Houses the state liaison program for INTERPOL. Processes all California requests for assistance from foreign countries. Assists California agencies in obtaining criminal investigation information from foreign countries.

Inquiries

CALIFORNIA DEPARTMENT OF JUSTICE
Bureau of Investigation
Organized Crime Unit
P. O. Box 163029
Sacramento, CA 95816-3029
(916) 227-4218/CALNET 498-4218
Fax: (916) 227-4097

ORGANIZED CRIME INVESTIGATION

The Bureau of Investigation provides intelligence information and assistance to local, state, and federal law enforcement agencies engaged in investigations of organized criminal activities.

Services

- ❖ Provides direct assistance in organized crime investigations (i.e., prison gangs) to local, state, and federal law enforcement agencies.
- ❖ Hosts and participates in seminars, conferences and intelligence meetings with regard to organized crime, terrorism/extremism and emergency services.
- ❖ Provides intelligence information from a variety of field sources, both law enforcement and informant, to other law enforcement entities for further development.
- ❖ Provides various forms of technical support services to assist law enforcement agencies during special investigations.

Inquiries

REGIONAL OFFICE FOR THE BUREAU OF INVESTIGATION
Los Angeles Regional Office
5700 S. Eastern Avenue
Los Angeles, CA 90040
(213) 887-4111
Fax: (213) 887-8719

SACRAMENTO REGIONAL OFFICE
3046 Prospect Park Drive, Suite 1
Rancho Cordova, CA 95670
(916) 464-2001/CALNET 433-2001
Fax: (916) 464-2058

SAN DIEGO REGIONAL OFFICE
555 W. Beech Street, Suite 300
San Diego, CA 92101
(619) 237-7361/CALNET 631-7361
Fax: (619) 237-7680

SAN FRANCISCO REGIONAL OFFICE
2720 Taylor Street, Room 300
San Francisco, CA 94133
(415) 557-2955/CALNET 597-2955
Fax: (415) 557-8437

SURVEILLANCE EQUIPMENT

The Technical Operations Unit supports local, state, and federal law enforcement agencies' investigative efforts by providing sophisticated electronic technology that includes a wide range of communications, video, and surveillance equipment.

Services

- ❖ Makes short-term loans of specialized equipment to state and local law enforcement agencies.
- ❖ Provides consultant services regarding the proper operation of various types of photographic, optical, electro-optical, video, and radio intercept equipment.
- ❖ Provides training in the correct use and operation of selected surveillance equipment with emphasis on the capabilities and limitations of the equipment. Training is provided both at the Department of Justice facility and off-site, by special arrangement.
- ❖ Provides audiotape filtering and enhancement, at the Department of Justice facility, by appointment.
- ❖ Assists and trains in pen register technology and installation by special arrangement.
- ❖ Assists local and state law enforcement agencies with the installation and operation of covert surveillance equipment. This assistance is provided by technical personnel under certain circumstances on a case-by-case basis.
- ❖ Assists local and state agencies perform "Interception of wire communications" in compliance with state law (629 PC), with proper recording and verification equipment. Requires special arrangements and circumstances.
- ❖ Provides publications or reports upon request to aid in the selection of equipment.
- ❖ Provides consultation on methods of surveillance using particular kinds of equipment and the capabilities and limitations of such equipment.

Inquiries

CALIFORNIA DEPARTMENT OF JUSTICE
Bureau of Investigation, Technical Operations Unit
Box 163029
Sacramento, CA 95816-3029
(916) 227-4142/CALNET 498-4142
Fax: (916) 227-4097

SEX/ARSON REGISTRATION

The Registration Unit maintains central statewide files on criminals who are required to register as sex offenders (290 PC) and arson offenders (457.1 PC).

Services

- ❖ Determines whether an individual is required to register.
- ❖ Maintains the automated, off line sex and arson registration and genetic marker information files.
- ❖ Provides law enforcement investigators, upon request, with listings of offenders who have registered in specific law enforcement jurisdictions.
- ❖ Notifies law enforcement agencies of offenders released from custody who are required to register and intend to reside in specific law enforcement jurisdictions.
- ❖ Assists law enforcement agencies in the identification of possible suspects in unsolved sex and arson crimes through the use of the off line Registration System, Genetic Marker (blood/saliva-sex registrants only) file, and the Registrant Photo file.
- ❖ Assists law enforcement agencies in the identification of offenders in violation of registration laws.
- ❖ Assists law enforcement agencies in the implementation and maintenance of manual and automated local sex and arson files.
- ❖ Trains criminal justice agencies on registration services provided by DOJ, registration requirements, and changes in registration laws.
- ❖ Evaluates out-of-state registration cases to determine requirements to register in California.

Inquiries

CALIFORNIA DEPARTMENT OF JUSTICE
Bureau of Criminal Identification and Information
Registration Unit
P. O. Box 903387
Sacramento, CA 94203-3870
(916) 227-3288/CALNET 498-3288
Fax: (916) 227-3270

CLANDESTINE LAB ENFORCEMENT PROGRAM

The Clandestine Lab Enforcement Program (CLEP) serves as the lead authority statewide to local law enforcement on clandestine laboratory enforcement. The program is dedicated to locating and prosecuting the operators of illicit laboratories producing controlled substances.

Services

- ❖ Provides coordination between law enforcement agencies involved in clandestine lab investigations.
- ❖ Provides analytical support in the way of link analysis, event flow analysis, and telephone toll analysis on major clandestine lab investigations.
- ❖ Responsible for assuring safety compliance wit state and federal regulations for personnel involved in the investigation of clandestine labs.
- ❖ Coordinates county reimbursement funds.
- ❖ Provides lab safety certification classes, annual recertification classes and supervisory certification classes to state, federal, and local law enforcement and forensic personnel.
- ❖ Provides lab training and expertise nationwide.
- ❖ Prepares and disseminates the quarterly California Clandestine Laboratory Newsletter.

Inquiries

CALIFORNIA DEPARTMENT OF JUSTICE
Clandestine Laboratory Enforcement Program
P. O. Box 161089
Sacramento, CA 95816-1089
(916) 227-3955/CALNET 498-3955

FINGERPRINTS

The Bureau of Criminal Identification and Information maintains a central repository of fingerprints and administers the California Identification (Cal-ID) System through which positive identification of individuals can be determined. Fingerprints submitted by law enforcement, licensing and regulatory agencies are classified, searched, verified, and indexed in computer and manual data base files. The

Division maintains the central site for the Automated Fingerprint Identification System (AFIS), Automated Latent Print System (ALPS), and the Digital Image Retrieval System (DIRS) databases.

Services

- Searches and conducts verifications of criminal and non-criminal fingerprints submitted by law enforcement.
- Provides expert testimony in legal proceedings and administrative hearings regarding information stored in bureau files as keeper of the records.
- Provides certified copies of fingerprints for use in civil legal proceedings and administrative hearings within California and in other states. A Subpoena Duces Tecum or a Court Order is required in most cases.
- Provides information pertaining to acceptable fingerprinting equipment and systems that can be purchased for use in fingerprinting adults and children.
- Provides expedite searching and verification of fingerprints when needed for criminal justice purposes.

Inquiries

CALIFORNIA DEPARTMENT OF JUSTICE
Bureau of Criminal Identification and Information
P. O. Box 903417
Sacramento, CA 94203-4170

FINGERPRINT PATTERN RECOGNITION
Latent Print Tracing
(916) 227-3314/CALNET 498-3314

CERTIFIED COPIES OF FINGERPRINTS
(916) 227-3328/CALNET 498-3328

CAL-ID DATA BASE SERVICE
(916) 227-3312/CALNET 498-3312

LIST OF FIRE INVESTIGATOR'S TOOLS AND EQUIPMENT

Adjustable Wrench
Camera Accessories
Cameras
Canvas Drop Sheet
Carpet Knife
Claw Hammer
Clip Board
Cotton Swabs
Coveralls
Eyedropper and Syringe
Film
Fingerprint Kit
Flash
Flashlight
Flat Shovel
Gloves
Gridding Cord
Hand Rake
Hand Shovel
Helmets
Hydrocarbon Detector
Knee Pads
Magnet
Magnifying Glass (Hand type and mount type with light)
Multi-purpose Saw
Notebook
Pencils and Pens
Plaster of Paris
Pocket Knife
Portable Pressure-Type Fire Extinguisher or Garden Hose with Nozzle
Portable Radio
Push Broom and Kitchen Broom
Safety Boots
Screwdriver Set
Stapler
Tape Measure (25' minimum)
Tape Recorder
Temperature Charts
Tongs
Tool Box
Wire Cutters
Wisk Broom

EVIDENCE CONTAINERS AND ASSOCIATED MATERIALS

Bags, Paper and Plastic, Various Sizes
Evidence Tags and Labels
Glass Jars
Glass Vials
Marking Pens
Masking Tape
Metal Cans with Lids, Various Sizes
Photo/Evidence Log
Small Evidence Boxes
String

EVIDENCE AND PHOTOGRAPHIC REPORT

PHOTOGRAPHS BY: _____ DATE: _____

EVIDENCE COLLECTED BY: _____ DATE: _____

INVESTIGATING OFFICER: _____

CODE SECTION:	CRIME:	CLASSIFICATION:
VICTIM'S NAME (LAST, FIRST, MIDDLE) FIRM, IF BUSINESS	ADDRESS: ☐ RESIDENCE ☐ BUSINESS	PHONE:

E	P	PHOTOGRAPHS (ALPHABETICAL) _____ TO _____ EVIDENCE (NUMERICAL) _____ TO _____	DISPOSITION

REPORTING OFFICERS	RECORDING OFFICER	TYPED BY	DATE/TIME	ROUTED BY

FURTHER ACTION:	COPIES TO:			
☐ YES ☐ NO	☐ DETECTIVE	☐ CII	REVIEWED BY:	DATE:
	☐ JUVENILE	☐ PATROL		
	☐ DIST. ATTORNEY	☐ FIRE DEPT		
	☐ SO/PD	☐ OTHER_____		

EVIDENCE TAGS

EVIDENCE Case No.: _____

Evidence Description: _____

Place Evidence Found: _____

Date and Time of Recovery: _____

Suspect: _____ Offense: _____

Victim: _____

Evidence Recovered By: _____

Signature

CHAIN OF POSSESSION ON REVERSE SIDE

FRONT

CHAIN OF POSSESSION OF EVIDENCE

Signatures Required

From: To: Date: Time:

_____

_____

_____

_____

_____

_____

_____

BACK

SAN BERNARDINO COUNTY SHERIFF'S DEPARTMENT
SCIENTIFIC INVESTIGATIONS DIVISION

GENERAL REQUEST FORM

Requesting Agency		Agency Case No.	
New Case	☐ YES ☐ NO	No.	
Date of Request	Date of Offense	Offense	
Requesting Officer/Employee No.		Telephone	
Delivered By	On	To	
Victims/DOB (last name first)	1.	Suspects/DOB (last name first)	1.
	2.		2.
	3.		3.

☐ **Technical Processing (Latent Fingerprints)** ☐ **Physical Evidence Examination (Crime Lab)**

Date Needed: _____ For: ☐ Investigative Lead ☐ Complaint ☐ Prelim ☐ Trial

Brief Summary of Case *(Indicate where evidence was found and/or collected and which victim or suspect it relates to.)*

DESCRIPTION OF EVIDENCE

Item Designations (A, B, C, etc.) — Property Tag No. – Package and Contents

Examination(s) Requested

CAL ID/FINGERPRINT COMPARISON

Print Name of Officer Lifting Latent _____ No. of Latents Submitted _____

Tenprint Card Submitted? ☐ YES ☐ NO Suspect's CAL ID Number: _____

PHOTO LAB

☐ Standard Photo Request ☐ Special Request

Instructions: _____

Date Notified: _____ Mail To: _____

Date To Lab: _____ Date Returned From Lab: _____

Total Fee: $ _____ Shipped/Received By: _____

Office Of The Attorney General
CALIFORNIA DEPARTMENT OF JUSTICE, BUREAU OF FORENSIC SERVICES

REQUEST FOR PHYSICAL EVIDENCE EXAMINATION

Requesting Agency: _____ County Of: _____

Offense: _____ Date of Offense: _____ Agency Case No.: _____

Suspect(s): _____

_____

Victim(s): _____

Investigating Officer: _____ Telephone: _____

Date Needed: _____

Attach copy of report or state summary of circumstances on back of sheet.

EVIDENCE SUBMITTED

☐ Physical Evidence Examination (Crime Lab)

ITEM #	DESCRIPTION	PURPOSE OF EXAM
Attach Additional Sheets As Required		

CHAIN OF CUSTODY

ITEM #	RECEIVED FROM	DELIVERED TO	DATE	TIME

To Be Completed By Laboratory **Court Due Date:**_____ **Current Priority:**_____

ITEM #	PRIORITY	SCHEDULED ANALYSIS

Notify Lab Immediately if Due Date or Priority Changes

CALIFORNIA DEPARTMENT OF JUSTICE-DIVISION OF LAW ENFORCEMENT
BUREAU OF FORENSIC SERVICES-LATENT PRINT PROGRAM
4949 BROADWAY, ROOM F-163, SACRAMENTO, CA 95820
Phone (916) 227-3797 Fax (916) 227-4079

For BFS use only			
BFS CASE #			
REFERENCE #			
_____ NEW	_____ ADD/RESUBMIT		
C.T.	C.P.	HRS	P/E

LATENT PRINT CASE SUBMISSION FORM

SUBMIT ONLY ONE CASE PER FORM (PLEASE PRINT OR TYPE)

AGENCY INFORMATION

Requesting Agency _____ County of _____
Offense _____ Date of Offense _____ Agency Case # _____
Victim(s) _____
Investigating Officer _____ Phone # _____ Fax # _____
Is Priority Processing Requested? _____ Reason _____

Subject	CII#	DOB

Subject	CII#	DOB

EVIDENCE SUBMITTED ***(ONLY ONE ITEM PER LINE)***

Item #	Description: Material Submitted, Evidence **MUST** be Tape or Heat Sealed, and Initialed.

CHAIN OF CUSTODY

Item #	Method Sealed	Received From	How Received	Delivered To	Date	Time

For BFS Use Only

Container(s)	Vault Location
Envelope(s)	
Bag(s)	
Box(es)	
Miscellaneous	

PLACE THIS FORM IN ENVELOPE ON OUTSIDE OF EVIDENCE PACKAGE

CHANGE OF CUSTODY/LOCATION

DATE	ITEM NUMBER(S)	FROM	TO	PURPOSE

DISTRICT ATTORNEY'S EVIDENCE RELEASE

ITEMS: ☐ ALL	DATE:	SIGNATURE:

RECEIPT OF ITEMS:	
RECEIVED FROM	
DATE:	SIGNATURE:
RECEIPT OF ITEMS:	
RECEIVED FROM	
DATE:	SIGNATURE:

RECEIPT OF ITEMS:	
RECEIVED FROM	
DATE:	SIGNATURE:
RECEIPT OF ITEMS:	
RECEIVED FROM	
DATE:	SIGNATURE:

UNIT 4: EVIDENCE

TRACE EVIDENCE

Physical evidence other than property is considered trace evidence. Trace evidence may be found at the crime scene or away from it, particularly on the suspect.

Trace evidence may consist of blood or body fluid, soil, tool marks, foot or tire tracks, flammables, fibers or hairs, glass, paint, fingerprints or explosive residue, and a myriad of other items that may connect a person directly to the crime scene. The California Department of Justice provides services for analysis of trace evidence and publishes many bulletins giving instructions on how to collect and preserve the evidence when found. Those bulletins are provided at the end of this chapter for your reference; although, as in everything, new methods are developed to detect or analyze evidence so the student should keep up to date with any changes. The bulletins may be found on the Internet at http://www.ns.net/cci.

Fingerprints are the most conclusive trace evidence that can identify a subject, although DNA testing can also be very conclusive. There are two types of fingerprints, latent, and patent. Latent prints are normally invisible to the eye; however, they may be visible if found on a piece of glass or metal object. Either dusting with a powder or a chemical process will make the print visible and identifiable. A new technique is the use of a laser beam or ALS (alternate light source). The most common powder used is black, but silver, white, or other colors may be used on contrasting surfaces. The three typical processes for chemical development of a print are iodine fuming, ninhydrin, and silver nitrate. The use of crazy glue fuming is an acceptable practice and can be easily used in the field.

If prints are developed using powder, they should be photographed and then lifted with an approved type of lifting tape or paper and submitted to DOJ for identification. Prints developed through a chemical process are left in place. If they are on a surface that is not feasible to store (such as an automobile) then they are to be photographed, preferably using a 1:1 scale. If that is not possible, then a ruler must be included in the photo.

Some prints may be made in soft material such as candle wax. The print should be photographed and collected intact for lab processing. See Physical Evidence Bulletins Nos. 16 and 17 for further information.

Tool marks are another type of trace evidence often left behind at a crime scene. In addition to the tool mark, paint chips may be left behind or taken. If possible, the tool mark should be collected as evidence. If it is on a doorjamb, the entire jamb may need to be taken. If the item cannot be collected, than the tool marks should be photographed and plastic casts taken. One product available for casting is

MIKROSIL. You should never insert the suspected tool into the impression, as it will destroy the evidentiary nature of the impression. Paint may be transferred from or to the tool. Samples of paint chips should be taken from the tool and at the tool mark. All layers of paint should be taken and control samples taken from both areas. More information can be found in the Physical Evidence Bulletins Nos. 27 and 5. All samples of paint should be placed in separate containers.

Often the arsonist will leave behind imprints of his or her shoes or tire tracks. Sometimes these can be readily seen as indentations in the snow or mud. Other times these imprints are difficult to see. They may be impressions left in dust on floors, windowsills, doors, etc., or they may be impressions left behind after the subject has stepped into a dusty material and transferred it to another location.

All impressions should be photographed using a measuring device in the photos before any attempt to further recover the impressions. The impressions may be recovered by using a casting material. The preferred casting material is dental stone, traxtone or die cut, rather than plaster of paris. Tire tracks should be measured for the wheel base width and length. Measurements for the width should be taken from the outside edge of the left tire to the inside edge of the right tire. Measurements for the length should be from the leading edge of the front tire to the leading edge of the rear tire. The width and pattern of the tire should also be noted. Keep in mind that what you are looking at in an impression is a negative of what the shoe or tire will look like. If you have a raised edge in the soil, it will be a depression on the shoe or tire.

Casts can actually be taken in the snow using snow print wax. If the suspects' vehicle or shoes are located, the shoe or tires should be recovered for comparison against the cast or photos. A search warrant may be required for such items. DOJ will provide the services to compare the items and identify if there are any matches. DOJ Physical Evidence Publication No. 23 gives further information.

The arson investigator often overlooks the possibility of having blood or other body fluids available at a fire scene for evidence. Blood, saliva, urine, perspiration, and seminal fluids can now be tested and DNA obtained making it possible to connect a suspect to the crime scene. Just as if he or she left a fingerprint behind.

When collecting these types of evidence, the investigator must be very cautious of his or her own safety. Gloves that will not allow any of the fluids to reach the skin must be worn at all times. If there is a chance of cross contamination, the gloves must be changed as often as necessary. A dust mask capable of preventing fine particles from reaching the nose or mouth must be worn if working with a substance that is dried. After the samples are obtained, the hands should be washed with a germicidal soap.

Bloodstains would most likely be found on glass where the suspect might have entered the building. The glass may have fallen and been protected during the fire leaving bloodstains behind. Saliva may be found on a cigarette in or near the fire. Perspiration may be found on clothing in or near the fire. Urine

or seminal fluids may be found a distance away from the fire as the suspect may have stood and watched the fire burn. If the blood is dried, it may be moistened with distilled water before the sample is obtained. The investigator should recover as much of the fluids as possible. DOJ Physical Evidence Bulletin No. 4 contains further information on bloodstains.

The investigator should not overlook the evidentiary importance of bloodstain patterns. The pattern of the bloodstains may show the subject moving into or out of the structure. If a murder is involved it may tell the investigator when in relation to the fire did it occur.

Fibers and hair are also often left behind or taken with the suspect. The investigator due to the difficulty in locating them often overlooks these items. If the structure is carpeted, more than likely anyone having been in the residence will be carrying some of the fibers with them on their shoes for a period of time. The DOJ lab has the equipment to test the fibers for comparisons and identify matches of different fibers. Fibers can also come from insulation, furniture, dust, or other products that may be unique to that location.

Hair may also be left behind, particularly if a suspect has entered through a tight opening such as a window. Hand, arm, or face hairs may be present on the windowsills or surrounding framing. Pubic hairs may be found in areas where you would find seminal or urine fluids.

A number of comparison samples need to be obtained for fibers. If the fibers are suspected of coming from the carpeting, samples from four or more places need to be obtained. NEVER place wet fibers or hair in a container. Allow them to dry before sealing as they may mold and render them useless. DOJ Physical Evidence Bulletin No. 6 contains further information on fibers and hair.

Soil is often overlooked by the fire investigator as an item to place a suspect to a scene. Again, the soil may be taken from the scene or brought to it. Usually a tablespoon of soil taken from the suspect or scene for comparison to other soil is sufficient. Up to three (3) tablespoons of soil is needed from the control sample to compare against the suspected soil. Soil should never be packaged while still wet or damp. Allow to air dry before packaging. DOJ Physical Evidence Bulletin No. 13 further identifies areas to take soil samples for comparisons. Unusual conditions should be noted such as the area is near a petroleum facility, etc. The peculiarities can further help limit the area the soils came from.

Seldom does an arsonist take a large piece of glass home with him or her from a fire scene. But what isn't known by most arsonists is that if a piece of glass breaks near him or her, minute particles may become lodged in the shoes or clothing. If recovered, these particles can be compared to the glass at the arson site, leading to the placement of the suspect at the fire scene.

Larger fragments may be able to be pieced together. This may allow a determination as to whether the glass was broken by a mechanical means or broke due to the fire. If this analysis is to be done

properly, all pieces of glass need to be recovered. DOJ Physical Evidence Bulletin No. 9 gives further information on recovering glass as evidence.

The fire investigator may uncover evidence that shows a firearm was used at an arson fire. Normally the use of a firearm is associated with a murder or suicide. The local police or coroner's office would want to collect any of the evidence associated with a crime where a firearm is involved. However, the fire investigator should be aware of the types of evidence that may be present and methods of securing that evidence. There may be times when the local police or coroners office does not have the personnel available to collect all of the evidence. Evidence of firearm use may be left at the fire scene or taken away by the suspect, sometimes unknowingly.

While a weapon in the fire scene with spent ammunition may be rather obvious of its evidentiary nature, traces of gunpowder or spent bullet casings, or the bullet itself strewn in the debris may not be readily apparent. Traces of gunpowder may be on the victim as well as on the shooter. Tests can be taken of a shooter's hands or clothing and traces of gunpowder can be detected. Marks on the shell casing or bullet may lead to the identification of the weapon used. The investigator should be extremely cautious in handling any weapons, especially if they were subjected to the fire elements, as safety mechanisms may have been damaged.

Just like gunpowder, explosives also leave residue. Residue may become lodged on the suspect's clothing or skin. Explosive residue may also be left after the explosion, allowing technicians to determine the type of explosive used.

Samples of gunpowder or explosive residues should be collected like fiber samples. They should be allowed to dry before sealing in a container. DOJ Physical Evidence Bulletins Nos. 12 and 15 give further information on the collection of gunshot residue and firearms evidence.

The most common trace evidence the fire investigator is likely to encounter will be a flammable accelerant. The use of the accelerant may be detected by the burn pattern, smell, or use of a mechanical sniffer or canine. At times, the presence of the accelerant will not be known until a technician tests the material submitted. Often the technician can determine the type of accelerant such as gasoline, turpentine, kerosene, etc. Material suspected of containing an accelerant should be placed in an airtight container. New paint cans are the best type of container for this material, although glass jars may be used. The investigator should never use plastic containers, unless they are made specifically for prevention of vapor loss.

The investigator may discover a container with a quantity of a flammable liquid. Only a cupful is needed to be submitted to the lab for comparison to other comparison samples submitted. As in all cases of submitting items for comparison, control samples must also be submitted. The control samples should be taken far enough away so that there is no contamination between samples.

Not every trace evidence item that an investigator may encounter has been listed here. The investigator must remember that although much evidence may be destroyed by fire, much evidence remains behind, sometimes in ash form but it still is evidence that may lead to an arson suspect or place the suspect at the scene. All too often, this evidence is overlooked or not even considered by the investigator. Most arson suspects are very unaware they are taking evidence with them or leaving it behind.

The California Department of Justice Crime Labs throughout California have highly skilled technicians capable of testing most materials submitted and comparing against known samples. The Federal Bureau of Investigation, and Department of Alcohol, Tobacco and Firearms are also a resource with lab facilities to test trace evidence.

The investigator must keep an open mind when investigating fires and continually investigate the possibilities that trace evidence is present that will lead to the person responsible for the fire.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PHYSICAL EVIDENCE CHART - COLLECTION AND PRESERVATION

This chart is not intended to be all-inclusive. If evidence to be preserved is not found herein, consult the specimen list for an item most similar in nature and submit accordingly. In any instance wherein the officer is in doubt as to appropriate procedures to observe, consult or defer to Crime Laboratory personnel assigned to crime scene investigation.

SPECIMEN	IDENTIFICATION	SAMPLE AMOUNT DESIRED	SPECIAL PRESERVATION METHODS	PACKAGING	PHYSICAL EVIDENCE BULLETINS
Abrasives, including carborundum, emery, sand, etc.	On outside of container. Type of material, Date obtained, Officer's name or number. If possible, the case number	1 tsp. - 1 oz.	None	Use container such as pillbox, powder box, or paper bindle. Seal to prevent loss.	PEB #9 Glass
Acids	Same as above Mark "CORROSIVE"	1 tsp. - 6 oz.	Should not be sent through mail. Extreme caution in handling.	All in glass bottle. Use plastic stopper/cap. Tape-seal stopper/cap.	PEB #10 Volatiles
Adhesive tape	On outside of container. Type of material, Date obtained, Officer's name or number, case number	1 ft. or all. Make sure to send end piece.	Caution regarding fingerprints or trace evidence (fibers, face powder).	Suspend between supports or place on waxed paper. DO NOT BALL UP.	
Alkalies - caustics, soda, potash, ammonia, etc.	Same as above Mark "CORROSIVE"	6 oz. Liquid 6 oz. Solid	Should not be sent through mail. Extreme caution in handling.	See above in "Acids"	PEB #10 Volatiles
Ammunition	On outside of container. Type of material, Date obtained, Officer's name or number, case number	Six to all	Should not be sent through mail. Handle carefully - possible latent prints.	Packed in tissue, soft paper, or cloth in small box.	PEB #12 Firearms
Anonymous letters, extortion letters	Place in paper envelope seal with evidence sticker. Place date and officer's mark on sticker.	All	Do not handle with bare hands.	Wrap securely. Place in manila envelope. Do not fold.	PEB #17 Lateens PEB # 19 Ques.Docs.
Arson debris	Label as to origin and collecting officer. Note if odor present or if reading on hydrocarbon sniffer.	Up to 1 pt of suspected accelerants. All (up to 2 qts of debris)	Do not send petroleum products through the mail.	Seal in clean empty paint can or glass jar. Fill container if possible.	PEB #10 Volatiles
Blasting Caps	As advised on lab consultation.	Call laboratory	Do not bring to laboratory or send through mails.	As advised on lab consultation.	

SPECIMEN	IDENTIFICATION	SAMPLE AMOUNT DESIRED	SPECIAL PRESERVATION METHODS	PACKAGING	PHYSICAL EVIDENCE BULLETINS
Blood: Liquid	Use adhesive tape on vial.	1 vial	Use sterile tube only. Use EDTA or heparin tube or if no preservative, refrigerate.	Wrap in tissue or soft paper. Place in strong cardboard box.	PEB #2 Alcohol PEB #4 Blood PEB #7 Sex cases
Bullets (not cartridges)	DO NOT MARK BULLET. Place bullet in container per instructions. Seal and label container. Make bullet sketch in your notes.	All	Air-dry if bloody. Do not lose adhering fibers of debris.	Place in soft tissue or paper, not in cotton wadding. Secure in pillbox or matchbox.	PEB #12 Firearms
Cartridge cases	Same as bullets	All	None. Possible latents.	Same as above	PEB #12 Firearms
Charred or burned paper	On outside of container indicate type of material, date obtained, officer's name and number.	All	Pack loosely on soft cotton. Should hand carry to Questioned Documents Section.	Pack in rigid container Mark "Fragile".	PEB #19 Ques. Docs.
Checks or other similar documents	See anonymous letters	All	Handle carefully. Possible latent prints.	Package between cardboard sheets and label.	PEB #19/#20 Ques. Docs.
Check Protector	Place officer's mark on sample impressions.	Obtain several copies in full word-for-word order of each questioned check-writer impression	Handle carefully. Possible latent prints.	Tag and place property.	PEB #20 Ques, Docs.
Clothing	Mark directly on clothing in waist band, pocket, or coat collar, officer's initials & badge number.		If clothing is wet with blood hang to air dry before packaging to prevent putrefaction, do no ball up; fold neatly with clean paper between folds and refrigerate if possible.	Each article individually wrapped in paper bag with identification written on outside of package. Place in strong container.	PEB #4 Blood PEB #9 Glass PEB #13 Soil
Drugs: Liquids, powders, pills and solids	Mark bottles, and fully label.	All	None	Seal in evidence envelope.	
Dry blood stains	On outside of pillbox. Type of specimen, date, officer's name and number.	As much as possible.	Keep dry. Do not use plastic baggies. Refrigerate if possible.	Sealed to prevent loss of scrapings	PEB #4 Blood
EXPLOSIVES	**CALL LABORATORY**				
Glass fragments	On outside of container. Type of material, date, officer's name and number.	1" square from each source. All of automobile lamp, bulb, filaments.	Keep evidence separated from sample.	Pill box, paper bindle or cellophane bag. Pack and seal to avoid movement in container.	PEB #9 Glass PEB #3 Light

SPECIMEN	IDENTIFICATION	SAMPLE AMOUNT DESIRED	SPECIAL PRESERVATION METHODS	PACKAGING	PHYSICAL EVIDENCE BULLETINS
Hairs and fibers	On outside of container type of material, date, officer's name and number.	Various loose combings, separate clumps of 15-20 closely cut pubic or head hairs from various areas.	Call laboratory for specific recommendations.	Pill box, paper bindle, cellophane bag. Seal	PEB #6 Hair
Metal	Same as above	One pound or all tools	Keep from rusting	Place in large envelope if possible.	PEB #4 Paint
Oil	Same as above	1 qt. with specifications	None	Sealed bottle or metal screw top can. Sealed.	PEB # 10 Flammables
Paint Liquid Solid (Paint Chips)	On outside of container. Type of material, origin, if known, date, officer's name and number. Same as above.	¼ pint At least ½ sq. inch of flake. Entire object if small.	None Caution to obtain sample from transfer area.	Paint can or glass jar. Sealed. Pillbox, paper, bindle, cellophane bag, sealed.	PEB # 10 Flammables PEB #5 Paint
Rope, twine, and cordage	On tag or container, type of material, date, officer's name and number.	1 yard	Preserve hairs, fibers, skin adhering bondage cases.	Place in envelope or wrap in paper. Seal	
Safe insulation or soil	On outside of container. Type of material, origin if known, date, officer's name and number. Safe manufacturer.	½ pound	None	Place in box. Seal to prevent loss.	PEB #13
Seminal stains	See clothing -Special preservation methods				PEB # 7 Sex cases
Stained clothing	Mark directly on clothing. Officer's mark, date. Do not use red ink or red pencil.	As found	If wet when found dry by hanging. Use NO HEAT to dry. No preservatives. **	Each article wrapped separately and identified on outside package. Place in strong package to prevent shifting.	PEB #7 Sex cases PEB #4 Blood
Tools	On tool or tag with officer's mark. Sketch shape, scratches, note color	All	Put envelope or fold sheet of paper carefully over end of tool to prevent damage and loss of adhering paints, etc.	Wrap each tool separately to prevent shifting.	PEB # 5 Paint
Tool Marks	On object or on tag attached to it. Marked on OPPOSITE end from tool marks. Officer's mark and date.	Send in too if found. Submit all items having too mark scratches.	Cover marks with soft paper and wrap with strong paper. Keep from rusting.	After marks have been protected, wrap in strong wrapping paper and place in envelope.	PEB #27 Toolmarks
Wire	On label or tag. Type of material, date, officer's name and serial number.	1 foot to all	If for cutter tool mark comparisons, DISTINCTLY MARK twist or otherwise label the end representing your cut off end. See rope, twine above.	Wrap securely	PEB #27 Toolmarks

SPECIMEN	IDENTIFICATION	SAMPLE AMOUNT DESIRED	SPECIAL PRESERVATION METHODS	PACKAGING	PHYSICAL EVIDENCE BULLETINS
Wood	Officer's mark directly on wood; also label as above.	1 foot		Wrap securely	
Wood shavings and borings from auger.	Place in box. Label box as above.	All	Pack loosely to avoid breaking chips and shavings.	Loose bag or box. Seal to prevent loss.	

** Do not allow staining material to be transferred to another garment or to a different area of the same garment.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #4: COLLECTION OF EVIDENCE BLOODSTAINS AND REFERENCE BLOOD SAMPLES FOR CONVENTIONAL TYPING AND DNA ANALYSIS

Bloodstains may be encountered as physical evidence in a variety of crimes such as homicide, vehicular hit-and-run, and burglary. The identification and typing of the bloodstains can assist in establishing elements of the crime, identifying, or eliminating a suspect, and can be used to corroborate or dispute the statements of principals.

I. GENERAL CRIME SCENE - Collect all items at the scene having possible evidentiary value; i.e., anything which might have originated from the suspect/victim (depending upon nature of scene) or provide information about what occurred. Process the crime scene systematically for evidence:

A. Photos: To record the scene and identify items of evidence.

B. Sketches: To establish spatial relationships.

C. Latent Print: Best evidence for identification of the suspect(s); should always be considered.

D. Footprints, Tire Tracks, Toolmarks: Impression evidence that may serve to identify suspect(s).

E. Biological Evidence - Biological evidence includes blood, saliva, and semen stains. Any of this evidence may be important and should be collected. These stains should be accompanied by control samples from unstained areas near the collected stains. A forensic light source (e.g., *Polilight)* may be of assistance in locating these stains.

II. BLOODSTAINS FOUND AT CRIME SCENE - All biological evidence is subject to deterioration. The careful collection and storage of this evidence will help insure that this evidence is preserved so that useful information can be obtained from its analysis. The pattern of bloodstain evidence may sometimes contain important information. If the bloodstain pattern is determined to be important, it should be documented with appropriate sketches and photographs. Finally, biological evidence can contain infectious organisms (e.g. hepatitis virus) which can be transmitted to any person who contacts it. For these reasons, it is important to take proper safeguards to insure the safety of all personnel.

A. Safeguards while handling biological evidence include:

1. Wear gloves
2. Dust mask should be worn if dealing with dried blood which becomes airborne
3. Keep any contaminated surface (e.g. gloved hand) away from face to prevent contact with mucous membranes (e.g. eyes, nose).
4. After dealing with evidence, properly dispose of gloves and wash hands with germicidal soap

B. Goals of Biological Evidence Collection

1. Collect as much sample as possible from a single source.

a) Keep biological evidence stain concentrated.

2. Insure that the sample is not inadvertently mixed with other biological samples.
   a) Wear gloves.
   b) Change gloves if they become stained with any biological sample.
3. Handle the sample in a manner that minimizes deterioration of the sample.
   a) Air dry the sample as fast as possible.

C. Recommendations for collecting bloodstains:

1. Handle the evidence stains little as possible. When possible, submit the item with the stain. This is the easiest and best method to collect biological evidence. If the stain is on a smooth, non-porous surface and can be easily dislodged, protect if from contact with other objects (e.g. immobilize in box).
2. If the stain is on a large object with a porous surface (wood or carpet), the area with the stain can be cut out and packaged in paper. Be sure to include a portion of the unstained material as a control.
3. If it is not possible to collect the object or cut out the stain, using a slightly moistened (with distilled water) cotton swab may collect the stain. While collecting the stain, an effort should be made to concentrate it onto a small area on the swab. A control sample of an unstained area close to the bloodstain should also be collected using the same distilled water and type of swab that was used to collect the evidence. Allow the samples to air dry, then package in appropriately marked paper envelopes or folded paper bindles.
4. The size of the stain should influence the size of a substrate used to collect the stain. Thus, use a small part of a swab or a small piece of gauze to collect a small stain. Do not smear a small stain over a large surface.
5. To keep the stain concentrated, collect the stain on the smallest area of the swab or cotton gauze.
6. Small biological evidence stains (e.g. 2 mm size bloodstain) may need special handling:
   a) Put on a fresh pair of gloves before collecting these small stains.
   b) A swab is probably the best sample collection device.
   c) If these stains have to be manipulated by a tool, consideration should be given to using new, disposable implements (e.g. new razor blade/disposable pair of tweezers).
7. Try to minimize the amount of time a stain is kept wet. Air dry all wet stains as soon as possible. Do not expose to heat or sunlight in an attempt to dry the stain.
8. Care should be taken to insure that biological evidence is not contaminated during its collection:
   a) To avoid contamination, do not allow one evidence stain to come into contact with other biological samples.
   b) Each individual stain should be collected separately. Do not collect or package two separate stains together.
   c) Do not allow evidence samples to come into contact with any surface that contains residue from another biological sample (e.g. dirty tweezers, bloodstained glove, contaminated work surface).
   d) Use tweezers that have smooth, easy-to-clean working surfaces.
   e) Tools (e.g. tweezers, scissors) can be cleaned by thoroughly rinsing with a stream of distilled water and drying thoroughly with paper tissue. Repeat this process *twice* before using tool to manipulate another sample.

9. Package all biological evidence in paper bags or envelopes. Do not use plastic.
   a) Allow stains to air dry as much as possible before placing in paper bag or envelope.
   b) Package the "unstained control" separately from the evidence stain.
   c) Package different evidence items in separate paper containers.
   d) Insure that paper container is large enough to allow air circulation around evidence item.
   e) Clean paper can be placed on (or in) a bloodstained garment and the garment folded so that the paper prevents contact between different stains. Insure that while items are drying that the stain patterns are not altered or the stains cross-contaminated with another wet stain.
   f) Metal or glass evidence items (e.g. knives or bottles) should be secured with wire to the bottom of a cardboard box so that it does not pierce the sides of a paper container. If not secured, blood on a knife blade can become easily dislodged and lost. Do not freeze metal or glass evidence items with bloodstains.

III. COLLECTION OF BLOOD SAMPLES FROM LIVING SUBJECTS

A. Reference Bloods Sample from Victim & Suspect - Collect two separate blood samples, approximately 5cc each, one in a yellow-stoppered tube [containing ACD solution B] and one in a lavender-stoppered tube [containing EDTA]. The crime laboratory should be informed if the subject had recently received a blood transfusion of any kind.

B. Sample for Blood Alcohol or Drug Analysis - Collect this sample in a gray stoppered tube [containing potassium oxalate/sodium fluoride].

IV. COLLECTION OF BLOOD SAMPLES FROM POSTMORTEM SUBJECTS

A. Reference Blood Samples - Blood samples should be obtained from non-body cavity areas such as heart or major internal blood vessels. Collect two separate blood samples (approximately 5cc each), one in a yellow stoppered tube [containing ACD solution B], and one in a lavender-stoppered tube [containing EDTA.]

B. If the body has decomposed, in addition to the blood sample, collect as many of the following specimens as possible: a portion of deep muscle tissue, certain organ tissue (e.g. heart or brain/not liver or kidney) an intact molar tooth, and a sample of compact bone (e.g. femur). Specimen should be away from site of injury (i.e. if head injury, do not take sample of brain tissue). Immediately freeze specimens; do not place in any preservative (e.g. formalin). The crime laboratory should be notified if the subject had received a blood transfusion. The subject's bloodstained clothing may be useful as reference in this case. Air dry and freeze.

C. Sample for Blood Alcohol or Drug Analysis - Collect this sample in a gray stoppered tube [containing potassium oxalate/sodium fluoride].

V. EVIDENCE STORAGE

A. Submit all items to the BFS laboratory in your area as soon as possible.

B. If the evidence can not be immediately submitted to the laboratory:
   1. Refrigerate liquid blood samples. Do not freeze.
   2. Air dry all bloodstained items. Do not subject to heat.
   3. Until submission to the crime laboratory, freeze all bloodstained items except for any metal or glass items (e.g. knives, bottles). Metal or glass items should be stored at room temperature and submitted to the laboratory as soon as possible.
   4. Evidence from the suspect and victim must be handled and packaged separately.

VI. RELATED PHYSICAL EVIDENCE BULLETINS (PEB)

A. PEB 6 - "Collection of Fiber and Hair Evidence"

B. PEB 7 - "Collection of Physical Evidence in Sexual Assault Investigations"

C. PEB 27 - "Evidence from Autopsy"

SUBMIT A COPY OF THE POLICE REPORT TO THE CRIME LABORATORY WITH ANY EVIDENCE SUBMITTED. CONTACT YOUR LOCAL BFS CRIMINALISTICS LABORATORY IF YOU HAVE ANY QUESTIONS.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #5: COLLECTION OF PAINT EVIDENCE

Paint evidence is found in the majority of hit-and-run cases, and it may provide a link between a victim and the responsible vehicle. Paint evidence may also be present in various other types of crimes, including burglary and homicide cases.

I. HIT-AND-RUN CASES

A. Paint transferred to the clothing of pedestrian victims is usually present in microscopic quantities. Dry the garment completely if damp, but DO NOT HANDLE EXCESSIVELY. Then carefully wrap each item separately by rolling in paper or place each garment in a separate paper bag for delivery to the laboratory.

B. Many modern vehicles have more than one color and the paint transferred may only represent the color of the particular area on the vehicle that made contact with the victim.

C. It is sometimes possible to obtain the make, model and year of a vehicle from a paint transfer. This is particularly possible when Original Equipment Manufacturer (OEM) paint, representing several layers, has been left at the scene. In addition, broken lenses or other vehicular parts that are present are useful in make/model searches and they should always be submitted to the laboratory along with any paint evidence. A copy of the officer's report should also be submitted to the laboratory, as it may contain information pertinent to the search.

D. In some cases, it has been possible to physically match paint chips, broken lenses and other vehicular body parts found at accident scenes with the suspect's vehicle. Therefore, care should be taken to protect these items from breakage when they are collected.

E. Photograph all areas showing fresh damage on all involved vehicles, and collect exemplar paint samples from these areas. It is very important to collect samples from all of the damaged areas since paint of different type or composition may be found in different locations on the same vehicle, even though the topcoat color is the same. If bending the metal slightly can flake off the paint, remove it in this manner. If not, cut the paint off using a clean knife blade, or razor blade. Make certain that samples of all layers down to the metal are collected. Carefully wipe the blade of any knife or tool employed before collecting each sample to prevent cross contamination. Place each sample collected from different areas in separate containers. These exemplar samples should represent an area of at least ¼" x ¼" to provide sufficient material for laboratory examination.

F. Cross transfers of paint commonly occur in hit-and-run cases involving two or more vehicles. If loose paint chips are located, collect and store them in appropriate containers as discussed in Section C of this document. If the transfers are smeared on the surface, flake off chips or cut paint from the vehicle and include the transferred paint as well as the top layer of paint originally on the car. Keep all transfers recovered from different areas in separate containers.

G. When cross transfers occur, always collect known, uncontaminated samples from areas immediately adjacent to each collected transfer. This is of great importance since such specimens permit the laboratory to distinguish between the transferred paint and the paint originally present on the vehicle.

II. BURGLARY CASES

A. Tools used to gain entry into buildings or safes often contain traces of paint as well as other substances such as plaster, safe insulation, wood, etc. Care must be taken that this type of trace evidence is not lost. If such transfers are present, wrap the end of the tool containing the material in a paper bag and seal with tape to prevent loss. Do not attempt to fit the tool into marks or impressions found. If this is done, transfers of paint or other material might occur and any material later found will not be significant as evidence.

B. Collect specimens of paint near all areas with which the tool may have had contact at the crime scene. These samples should include all layers present.

C. The tool itself may be painted and traces of this paint could be left at the crime scene, either on the toolmark or on the ground below the damaged area. Careful search should be made of each tool mark for any such evidence, and if present, the paint should be documented and collected. (See PEB No. 27 for the handling of tool mark evidence.)

III. RECOVERY AND PRESERVATION OF PAINT SPECIMENS

A. Keep all samples collected in separate containers.

B. If the sample is very small or difficult to remove and the complete exhibit itself can be submitted to the laboratory, then collect the entire object. This is the best procedure, as it will allow all of the paint to be examined, while minimizing the loss of such evidence.

C. Always chip, cut, or otherwise remove samples of all layers of paint, if the entire object containing the paint cannot be submitted to the laboratory. Avoid collecting samples by scraping.

D. Glass vials, and metal or cardboard pillboxes should be used to store collected paint samples since they can protect paint chips from breakage and damage. If cardboard pillboxes are used, be sure to seal the box to prevent the leakage of small paint samples. Plastic containers should be avoided due to static electricity, which makes removal of small chips very difficult. If glass vials or cardboard pillboxes are unavailable, then small paint chips can be collected into paper bindles, and the bindles placed in envelopes. Care should be taken so as to prevent loss, contamination, and damage to such samples when using paper bindles and envelopes for collection and storage.

E. A very useful method for securing paint from vehicles, walls and similar locations is to place a short strip of plastic tape on one side of the open end of a small envelope (but make sure paint doesn't leak out corners). The tape and envelope are then attached to the object containing the specimen. By holding the envelope open with one hand, paint can be chipped loose and into the envelope with a clean blade. Once the sample is in the envelope the tape can be removed, the open end of the envelope folded several times, and then this folded area sealed with tape. Such a container may then be easily marked for identification.

F. Collecting paint chips using tape lifts should be used only as a last resort because the adhesive from the tape could potentially compromise the laboratory analysis of the paint evidence. If tape lifts are collected, frosted scotch tape (such as "Magic Tape") should be used since it tends to be less sticky than clear tapes. **Do not use fingerprint tape when collecting tape lifts, or any other tape that has a very sticky adhesive.**

G. Markings placed on labels, envelopes or other containers should include the collector's name, date and time of collection, as well as the specific source of the sample and location from which the sample was collected (for example: R/F fender 1970 Ford, blue in color, license #ABC 123). The Vehicle Identification Number (VIN) should also be included as this can be used to verify the make, model, year and color of the vehicle.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #6: COLLECTION OF FIBER AND HAIR EVIDENCE

INTRODUCTION

Many crimes involve direct physical contact between victim and suspect. Whenever such contact occurs, there is frequently an inadvertent transfer of microscopic evidence. This evidence transfer is usually hairs and fibers. However, investigating officers because it is not easily observed may often overlook this type of evidence, which can be microscopic in form. Even though the most commonly encountered fibers are white and/or blue polyester, cotton, or blends of these, this type of evidence should be collected and submitted for evaluation.

TYPES OF CASES IN THAT FIBER AND HAIR MAY BE OF VALUE AS EVIDENCE

Assault/Rape/Homicide - these types of crimes usually involve personal contact of some sort. Therefore, fibers and hairs may be interchanged between victim and suspect and/or their respective environments and apparel. Weapons and fingernail scrapings also may be important sources of fiber evidence. Bindings, such as rope, may also leave distinct fibers if a person was tied up.

Burglary - Clothing fibers will frequently be found at the point where the burglar may have been forced to crawl through a window or other opening. If no head covering was used, hair may also be found.

Hit-and-Run - Due to the forceful contact between victim and automobile, clothing fibers and hair can generally be found adhering to the fenders, grill, door handles, or parts of the undercarriage. Fabric impression patterns may also be observed on surfaces with which the fabric may have impacted.

COLLECTION, PRESERVATION, AND MARKING OF FIBER/HAIRS EVIDENCE

Before attempting specific procedures listed below, note the following general precautions:

1. The size of container should correspond to the size of the object.
2. Do not package wet evidence. Fibers or objects containing fiber evidence should be air dried before placing in appropriate containers. BIOLOGICAL STAINS DEGRADE WITH TIME. THIS PROCESS IS ACCELERATED WHEN ITEMS ARE WET AND SEALED IN AIRTIGHT CONTAINERS SUCH AS PLASTIC BAGS.
3. Do not wrap exhibits on a table top without first thoroughly cleaning that surface. Avoid cross contamination between all evidence and control samples.
4. Label all evidence containers with appropriate information such as submitter's initials, case or exhibit number, source, and date, to document the chain of custody.

COLLECTION PROCEDURES

1. Where fibers/hairs are visible and firmly attached to an inanimate object, photograph (if possible) and then transport to the lab:

Leave fibers/hair intact. (a) Diagram and note exact location and number of fibers/hairs adhering to each object. (b) Label object and package so that fibers/hairs cannot become dislodged in transit. (c) Label and reference to notes.

2. Where fibers/hairs are visible and not firmly attached, photograph (if possible), or if firmly attached and object is too large to send to the lab:

   After diagramming and noting each location, and the number of fibers/hairs present, carefully remove with clean tweezers and package. (b) Place fibers in small pillboxes, glass vials, or other tightly capped containers. Fibers may also be placed in small folded paper bindles. (c) Label and reference to notes.

3. Where fibers/hairs are possibly transferred to clothing of victim or suspect:

   (a) Be sure clothing is dry before packaging. (b) Keep each item separate. (c) Avoid disturbing soil, dust, blood, seminal stains, or other foreign materials adhering to clothing. (d) If any of the aforementioned are apparent, see appropriate PEB for special instructions. (e) Place ID mark on each item in an easily located area that does not damage the clothing. (f) After allowing wet apparel to air dry, carefully fold, wrap and package each article separately (do not use plastic).

4. For fingernail scrapings/clippings

   (a) Take scrapings from both suspect and victim. (b) Use a clean instrument such as a fingernail clippers, file, or toothpick. (c) Use a separate folded paper bindle for each hand to collect scrapings. (d) Place folded, labeled bindle in separate pillbox, glass vial or other small tightly capped container.

5. Where fibers are in hair of suspect or victim:

   Vigorously comb the subject's hair over a clean, white paper using a clean, fine-tooth comb. Carefully fold the paper, together with the comb, into a bindle to prevent loss of any trace evidence. Place the bindle in an envelope, seal it, and submit to the lab for processing.

6. OTHER SPECIAL TECHNIQUES SUCH AS TAPE LIFTING OR PROCESSING OF DEAD BODIES SHOULD BE REFERRED TO YOUR LOCAL CRIME LABORATORY FOR GUIDANCE.

7. Certain blood types may be detectable if the hair has been recently pulled. These hairs should be treated like physiological fluids, REFRIGERATED and brought to the laboratory as soon as possible. A sample of the blood of the various subjects should also be submitted.

COLLECTION OF FIBER AND HAIR EVIDENCE

COLLECTION OF CONTROL SPECIMENS OF FIBER AND HAIR

Fiber Controls - When the investigating team has collected fibers, it is imperative that appropriate and adequate control specimens also be submitted. This could involve multiple control samples such as front and rear vehicle carpets. A control sample about the size of a $.25 piece will usually suffice.

Hair Sample Controls - Whenever hair is collected, the roots should be included because considerable information can be obtained. People may not like to have their hair pulled by another person. However, they generally can be persuaded to pull out enough of their own hair for root evaluation. The preferred method of sample collection is this order: (1) pulled hairs, (2) backcombed hairs, and/or (3) close cutting.

- **Head or Scalp Hair** - "New" (unused) plastic combs should be used to collect loose hair from all parts of the scalp. COMBS SHOULD BE USED ONLY ONCE. BACK COMB THE SCALP HAIR BRISKLY. Catch falling hairs in piece of paper, fold into a bindle and place bindle and comb into envelope. Seal and label appropriately.

It is suggested that hairs should be representative of the left temple, the right temple, crown, and the base of the neck. At least 15-20 hairs from each area should be submitted.

- **Pubic and Other Body Hairs** - When indicated by circumstances of the case or when requested by the laboratory, appropriate body hairs (pubic, chest, etc. - at least 15-20 hairs from each area) are recommended. Use a separate container for each area with appropriate labeling.
- **Animal Hairs** - Comb and pull 50-100 hairs (pulling is again preferred as roots are needed for species identification in some animals). Hair should be pulled from the head, back, tail and underbelly of animals. Label each sample appropriately. All samples must include the coarse guard hair and fine fur hair. If the animal is multi-colored in patches or stripes, samples from all major color areas should be obtained.
- The investigator should record the overall color of the subject's hair, his/her age; and any signs of hair treatment (i.e., gray, red, brown, etc.). Take samples of each color for comparison purposes.

FOR FURTHER INFORMATION AND INSTRUCTIONS, YOU MAY WISH TO CONSULT WITH THE CRIMINALISTICS LABORATORY SERVING YOUR AGENCY.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #9: COLLECTION OF GLASS FRAGMENTS

INTRODUCTION

The value of glass fragments as evidence is not always fully recognized. Windows, automobile glass, broken bottles, and other glass objects may be crucial evidence in burglaries, murders, hit-and-run and many other types of crime.

It is known that any person standing in close proximity to glass when it is broken will pick up fragments of the broken glass, particularly on a subject's clothing and shoes. Consequently, the clothing of burglary suspects, in cases where windows have been broken, will often retain microscopic glass fragments.

Frequently, as a result of hit-and-run accidents, headlight lenses can be broken (see PEB 3 12/98). Less common, but also possible, is the breaking of windshield glass. Therefore, both the scene of the accident and the clothing of the victim can be expected to be sources of glass fragments.

I. COLLECTION, PRESERVATION, MARKING, AND TRANSPORTATION OF GLASS

A. Fragments of Microscopic Size

1. Collection Procedure

a) These are usually found on articles of clothing, INCLUDING SHOES. Keep handling to a minimum, wrap the articles of clothing SEPARATELY, and label. Wet or bloodstained clothing should first be dried before packaging in paper. Other objects such as tools or bullets may contain glass fragments and are packaged as described below.

2. Marking and Packaging Procedure

a) Carefully place in the smallest container into which the object will comfortably fit. (For example: bullets can be placed in small pillboxes, shoes, and tools in shoe boxes.). DO NOT PACK WITH COTTON OR OTHER PROTECTIVE MATERIAL DIRECTLY TOUCHING OBJECT. To prevent rattling, object may be wrapped and sealed in butcher or brown paper and packed with crumpled paper or packing material.

b) Seal completely, leaving no holes or open seams through which the glass may be lost should it become loose from the object.

c) Label container completely and transmit to laboratory.

B. Large Visible Fragments

1. Collection Procedure

a) There is a chance that physical matching ("Jig-saw" type) may be accomplished with the fragments. Therefore, collect all the fragments present to permit reconstruction. If the nature of the breaking force or its direction is required, all fragments must be collected. The glass should be placed in a sealed paper bindle or a folded and sealed paper or plastic bag depending on size.

2. Marking and Packaging Procedure

   a) Place in pillbox or similar boxes with tight-fitting lids. DO NOT USE GLASS CONTAINERS. If glass is submitted for purpose of determining direction of impact of a bullet or other fracture analysis, RECORD WHICH SIDE OF GLASS WAS ON THE OUTSIDE OF THE WINDOW, AND WHICH SIDE WAS ON THE INSIDE.

C. Comparison Samples

1. Collection Procedures

   a) The laboratory examination of glass fragments is almost exclusively a process of comparison. For this reason, as much as possible of the broken glass must always accompany the rest of the evidence submitted.

2. Marking and Packaging Procedures

   a) If size limitations preclude collecting all the glass, always attempt to obtain a sample from an area near the point of impact, and then collect and mark separate specimens from distant corners of the pane as well.

   b) ALWAYS KEEP THE COMPARISON SEPARATE FROM THE QUESTIONED FRAGMENTS. Place in separate containers, and label accurately.

II. RESULTS POSSIBLE FROM LABORATORY EXAMINATION OF GLASS

A. If the pieces of broken glass can be made to fit together in the manner of a jigsaw puzzle, positive identification can be made.

B. Even glass fragments as small as the head of a pin can be compared. However, even if unusual properties are present, only a strong indication of common origin can be given and are not an absolute identification.

C. If a window has been struck with a blunt instrument such as a rock, stick, or fist, it is possible to determine the side of impact and the nature of the force involved.

D. If a bullet has penetrated a window, it is possible to determine the direction from which it was fired.

E. If two or more bullet holes are in close proximity, it is possible to determine the sequence of firing.

F. If a glass object has been exposed to fire, it can be determined if it broke as a result of the heat or by mechanical force.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #10: COLLECTION OF VOLATILE FLAMMABLES

INTRODUCTION

Combustion requires three elements - heat, oxygen, and fuel. Fire will be extinguished when any one of these three elements is absent. Fire does not burn solids or liquids (in general), but the gas formed above them. Heat acts to vaporize the liquid or solid, converting it to a gas, which then combines with oxygen to "burn" above the liquid pool. Thus, when flammable liquids soak into material or run into "cracks" there will be sufficient oxygen to support combustion. In these cases residue of flammable substances can be collected.

I. THE SCENE

A. An arsonist will often pour the volatile flammable in more than one place to be certain that "everything will go." Multiple points of origin are typical.

B. An arsonist will generally use more than enough liquid accelerant to be sure he has plenty. This means that frequently some will remain for the careful investigator.

II. LOCATING THE EVIDENCE

A. An experienced arson investigator combining the use of apparatus (combustible vapor detector), trained canines, and personal observation (appearances and odor) should locate points of origin of a fire. Specialized experience and training are invaluable in determining a correct cause. For example: arsonists have been known to pour a volatile liquid around each electric outlet to make the fire appear as though it was of electrical origin.

B. Newspapers, furniture, carpet, and padding, or piled trash may serve to protect an accelerant liquid from heat that would otherwise have vaporized and burned away.

C. Remember that if a liquid is poured on a dry surface it will act like water in the sense that it will wet, run, spill, leak, drip, pool, or spread. To some extent, porous materials will absorb it.

D. It will flow downward into and along cracks and through holes. It may then be protected by cracks and seams of the flooring, the soil, or whatever surface there is below the floor.

E. A liquid will protect the surface carrying it until the liquid is vaporized away, causing charring. The unburned areas around and beneath the char may very well still contain the suspected liquid that can often be verified by analysis.

III. COLLECTING THE EVIDENCE

A. After a suspected area is discovered, first document it with proper photographs, sketches, and notes.

B. Within reason, collect as much of the suspected material as possible, and place in a sealed container. A clean one-gallon wide mouthed paint can or glass jar is usually sufficient. Do not use a container that has been used previously to hold any volatile flammable, solvent, or oil. Do not use plastic bottles or bags; they are porous to volatile flammables.

IV. COLLECTING THE EVIDENCE

A. Label the container giving the following data:

1. LOCATION: An exact description of where it was found or obtained.
2. DATE AND TIME: When it was collected.
3. NAME OF SUSPECT and/or VICTIM.
4. DEPARTMENT CASE NUMBER
5. NAME OF FLAMMABLE LIQUID suspected to have been used.
6. NAME OF INVESTIGATOR/EVIDENCE COLLECTOR.

B. Collect in different areas from each set, placing each sample in a separate labeled container.

C. Do not overlook other types of physical evidence material to the case; e.g., broken glass, toolmarks, etc.

V. COMPARISON STANDARDS

A. Always attempt to obtain samples (comparison standards) of any liquids that could possibly have been used as the volatile flammable accelerant. Also, obtain comparison standards (controls) of other unburned "fuels" such as carpets, drapes, upholstery, etc., as they may contribute to the residues detected.

B. In the case of gasoline, include samples from the stations where it might have been purchased. If siphoning from a car tank is suspected, include a sample from the vehicle.

C. Place each comparison standard in a separate airtight glass or metal sealed container. Always label each comparison standard as carefully and completely as any other evidence material (See above).

D. Always transport in such a way that there can be no question regarding the possible accidental contamination of any of the questioned sample above. A narrative report describing the fire scene, its suppression and follow-up investigation should be included when available.

VI. RESULTS

A. The laboratory will identify volatile flammables present. This identification may not be specific due to changes undergone by the liquid during or after the fire. In cases of unusual or extensively burned accelerants, the lack of a comparison standard can make identification difficult.

B. The flammable accelerant can be identified as consistent in origin with a submitted control. However, unless unusual contaminants are present, absolute identification to specific origin or batch cannot be established.

LOCAL AGENCIES MAY WISH TO CONSULT WITH THE CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION, OFFICE OF THE STATE FIRE MARSHAL, ARSON AND BOMB INVESTIGATION BY CONTACTING THE LOCAL CDF EMERGENCY COMMAND CENTER.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #12: FIREARMS EVIDENCE COLLECTION PROCEDURES

INTRODUCTION

Firearms evidence is usually encountered in crimes against persons such as homicide, assault and robbery; but may also be found in other crimes such as burglary, rape, and narcotics violations.

While comparisons of bullets and cartridge cases to specific firearms are the most common examinations requested, other examinations are possible such as: distance determinations based on powder residue or shot spread; examination of firearms for functioning or modification; sequence of shots fired and trajectories; list of possible weapons used; serial number restoration and ownership tracing.

Evidence of firing or handling a firearm may be detected through the analysis of gunshot residue collected from a person's hands or other body surfaces. (See PEB 15 12/90).

EVIDENCE FIREARMS-HANDLING AND SAFETY

The location and condition of firearms and related evidence at a crime scene should be diagramed and photographed before recovering and securing. Although physical evidence is important, safety must be the first consideration. Each situation should be evaluated before deciding to unload an evidence firearm. (Caution, treat a firearm at all times as if it were loaded). If the weapon is a type that can be safely transported in a loaded condition, this can be done. However, depending on the circumstances it may be unnecessary or unwise to transport a loaded firearm. It should then be unloaded, with care taken to preserve all types of possible evidence. This evidence includes fingerprints, blood, hair or fibers, cylinder "halos," and debris in the barrel and/or cylinder. The weapon should be handled on those areas least likely to retain latent fingerprints such as knurled or checkered areas.

UNLOADING REVOLVERS

Prior to moving the cylinder it should be marked, to indicate its position as found. This can be done by two pen or scribe marks on the top of the cylinder along each side of the top strap of the frame. The position of each cartridge/case in the cylinder should be recorded in field notes as diagramed below. All cartridges/cases removed should be handled so as to preserve possible fingerprints. Each cartridge case should be packaged separately and referenced to the information in the field notes. Do not mark the actual cartridge/case.

FACING REAR OF CYLINDER

Appearance of cylinder as recovered

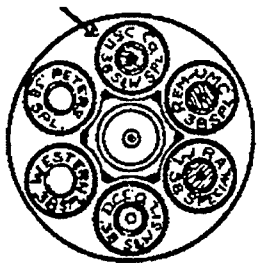
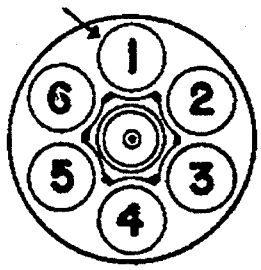


Diagram to be made by officer recovering weapon



EXAMPLE NOTES

CHAMBER POSITION	CONDITION	CARTRIDGE HEADSTAMP
1	Fired	U.S.C. Co.
2	Fired	REM-UMC
3	Fired	WRA
4	Misfired	D.C. Co.
5	Loaded	WESTERN
6	Loaded	PETERS

UNLOADING SINGLE SHOT OR AUTOLOADING FIREARMS

Before securing the firearm as evidence make a record of the position, as found, of any safety, cocking indicator, loaded chamber indicator, selector, or other control feature. With the firearm pointed in a safe direction, remove the magazine. Next, clear the chamber by slowly drawing back the slide/bolt handle. With the slide/bolt to the rear, examine the chamber visually to ensure that no cartridge is in the chamber. Separately package the firearm, any detachable magazine, and/or extracted cartridges/cases. Again, take care to preserve any possible fingerprints or trace evidence. Do not remove cartridges from the magazine, or mark the cartridges/cases directly.

TRACE EVIDENCE AND FINGERPRINTS

Examine the weapon for possible trace evidence such as blood, hair, fibers, tissue, or paint that may be relevant. If it doubt, do not dust for prints. Submit in person to the laboratory and request that the firearm be processed for prints.

TRANSPORTATION TO LABORATORY

Personal delivery is preferred. A loaded handgun may be transported in a specially constructed box that has a means of securely holding the firearm and has a metal plate blocking the muzzle. If the firearm is to be sent by mail it must be unloaded and securely packaged.

NOTE TAKING AND EVIDENCE MARKING

Make a sketch of the area that shows the location of each evidence item collected. The sketch should contain location measurements that reference each evidence item to a fixed object or a reference point. Photographs should be used to

supplement notes and sketches, but not as a substitute for them. For later identification, the serial number of a firearm should be recorded. Some older rifles and shotguns, however, may not have a serial number. If the firearm is marked for identification by scribing, the marks should be placed in a location were they will not damage the appearance or value of the firearm.

BULLETS EMBEDDED IN WOOD OR PLASTER

Do not attempt to dig a bullet out. Remove by cutting out a portion of tile material in which the bullet is embedded. Send the piece of material containing the bullet to the laboratory.

REMOVAL OF AN EVIDENCE BULLET FROM THE BODY OF A DECEASED PERSON

X-ray the body first. Ask the doctor not to use forceps, but, if possible, to use his fingers or rubber-tipped forceps to remove bullets. Bloody bullets should be washed in running water without scrubbing. Do not wash a projectile if trace evidence might be present such as may occur in a ricochet or deflection. If a bullet is washed, do not use a brush or other item for cleaning. After washing, it is IMPERATIVE bullets be dried prior to packaging. Dry the bullets by blotting (not rolling) with a soft dry facial or toilet tissue. Sealing a bloody or wet bullet in an airtight package can cause corrosion of identifiable detail on the bullet. Wrap in soft tissue paper and seal in a labeled paper envelope or box. Package each bullet separately. DO NOT MARK the bullet or allow it to be marked. Mark the sealed container with a description of the bullet and all other pertinent data. You may wish to make a sketch of the bullet for your records. If you wish consultation on these procedures as they relate to your specific case, call the local criminalistics laboratory.

FIRED CARTRIDGE CASES, WADS AND PELLETS

CARTRIDGE CASES: It may be possible to determine the position of a shooter by the location of ejected cartridge casings. Make a sketch with ACCURATE measurements of the location of fired cartridge cases. Again, package each item separately and mark the packages with the pertinent information.

SHOT WADS: When a shotgun is fired, the wads travel along with, or behind, the shot charge for a short distance. In those cases involving close shots, wadding may be found in either the victim's body or in his clothing. Follow same packaging procedure as for bullets.

SHOT PELLETS: For pellets embedded in wood, plastic, etc., handle in same manner as bullets embedded in solid objects. If it is not possible to submit the material in which pellets are embedded, pellets may be dug out, taking care not to mutilate them any more than is absolutely necessary. In removal of pellets from the body of a deceased person, x-rays can help locate the pellets. Use special care in recovering pellets so that there will not be undue damage to them. Rubber-tipped forceps should be used. After washing, wrap collected pellets in soft tissue paper and place in a labeled pillbox, or small envelope.

LOADED SHELLS OR CARTRIDGES: Collect and submit to the laboratory all ammunition associated with a case. It can be used for test firing and distance determinations. Exactly duplicating the ammunition used may be critical. Document where such ammunition was found. If the number of cartridges is relatively few, they can be handled in the same manner as fired bullets. Large quantities should be placed in a cardboard box or wooden container. Label, seal, and deliver to the laboratory. Note: Postal regulations prohibit shipment of explosive substances through the mail. Loaded ammunition should be personally delivered or sent by UPS with the proper warning labels.

DISTANCE DETERMINATIONS

In some cases, such as suicides and alleged struggles for the gun, the distance between the muzzle of the gun and the victim may become an issue and it will be desirable to examine garments for powder residue and other indications of close firing. For protection in transporting, the clothing of the victim should be rolled (after air-drying) with paper on each surface. Package separately so that the area surrounding the bullet hole does not rub against other clothing or objects. When bullets

have passed through garments into the body, a clear photograph of the bullet hole positions in the victim is desirable. Include a ruler in all photographs. Submit the firearm and the unfired ammunition associated with the incident. The use of identical ammunition is an essential part of firing distance determinations.

FURTHER INFORMATION ON FIREARMS' EVIDENCE CAN BE OBTAINED FROM THE LOCAL CRIMINALISTICS LABORATORY SERVING YOUR AGENCY.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #13: COLLECTION OF SOIL SAMPLES

INTRODUCTION

Naturally occurring soil is a complex and changing mixture of living organisms, decaying organic matter, air, water, and relatively stable rock and mineral fragments such as clay and sand. Although there are many different types of soils in the state of California, specific local areas contain relatively few of these varieties. Each type may exist for a few square yards or for many square miles with the amount of variation in a single soil being quite limited. Hence, it is not feasible to exactly pinpoint the origin of a particular naturally occurring soil sample, but rather to relate it to areas of occurrence.

Soil samples may also contain debris from human habitation or industrial operations. The latter type of debris; e.g., paint droplets, cinders, chemicals or fibers, if sufficiently varied and unique, can be most valuable in individualizing a specimen. Soil samples containing such unusual features can be excellent and unexpected physical evidence. Consequently, all soil samples should be submitted in anticipation that this rare occurrence may actually happen.

Not only do the character and composition of soils vary laterally, but also with depth. Unless a crime is committed which involves the digging of a grave, most samples for soil comparison will be from the top surface. Although the color and texture of soils visually do not appear to vary along the ground, the chemical composition can change sufficiently in a short distance, so that it may be significant in localizing the source of the soil sample. Therefore, sufficient samples should be submitted in order to establish the normal distribution of soil of a particular type in and about a crime scene.

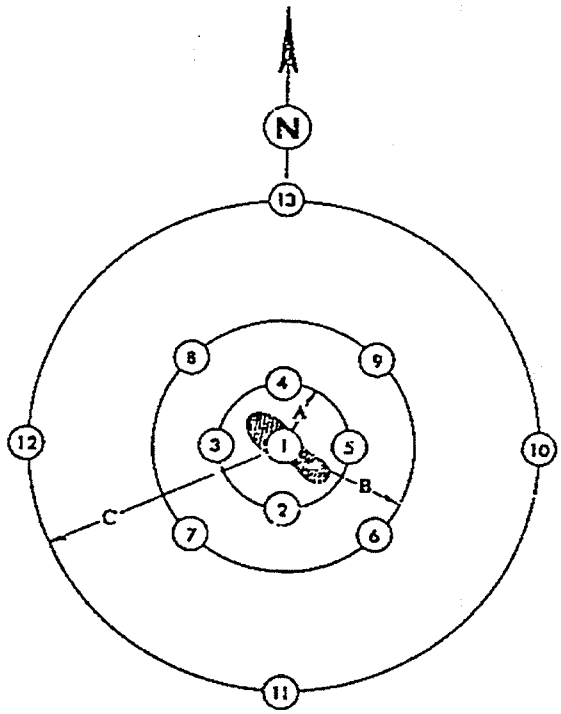
PROCEDURE

Impressions - Insure that impressions in soil such as footprints or tire tread patterns are photographed with a scale and a plaster cast made before disturbing the footprint in any manner (see PEB 23 Rev. '98). Impression evidence is frequently much more positive than a soil comparison.

Suspect Samples - A tablespoonful is sufficient quantity for a soil comparison. If the soil is firmly attached to some object **do not remove**, but AIR DRY and place the object in a paper bag or other appropriate container, seal and label. Loose soil or sand can be swept onto a clean piece of paper that is then folded to enclose the specimen and, when completely dried, sealed in an appropriate container, and labeled as to source.

Comparison Samples - Obtain samples consisting of at least three (3) tablespoonfuls of soil from each area where the suspect is known, or is believed to have been at the scene, including any "alibi" sites provided. Comparison samples must be representative. If, for example, suspect shoes have been recovered and soil is present on the shoes, recover a soil sample from the area of the footprint that corresponds to the location of the soil on the shoes. If soil on the shoes appears to be from the surface where the footprints are found, collect surface samples (top quarter inch). If the soil may be from an excavation of some type, collect specimens at many different depths and mark the depth at which each was recovered.

It is also advisable to collect samples from other locations in the vicinity of the crime scene, so that the laboratory can determine how much variation there is in the soil of that area. In, for example, a yard, collect from several areas in the yard and also from adjoining property. In open areas the following systematic method for recovery of soil samples can be used:



A = 10 ft.
B = 50 ft.
C = 100 ft.

Start at point number 1 (footprint, tire impression, area of obvious scuffle, etc.) and obtain soil samples at each point, 1 through 13. Each sample should be numbered to correspond with the number on the diagram. Record a description of the physical location from where the soil sample was collected (e.g., ditch) and note any unusual conditions in the vicinity (e.g., close to petroleum tank).

Always air dry out damp soil samples prior to packaging or mold growth will occur. Seal the dry sample in a pill box or vial and label **completely** as to location recovered, officer collecting, date, time, etc.

Submission - Collect samples as soon after the event as possible, before any changes in the site can occur. Submit samples personally or by mail as soon as possible to your nearest Regional Criminalistics Laboratory.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #15: GUNSHOT RESIDUE COLLECTION (GSR)

INTRODUCTION

Gunshot residue results from the discharge of a firearm. This includes primer, powder, and/or projectile material and products of their combustion. The residue that can be deposited on the hands of a shooter is usually the result of gases or particles escaping through openings in the weapon (such as the cylinder area of a revolver) or leaving the end of a barrel. The actual amount of residue on the hands varies with the type of weapon, ammunition, and conditions of discharge.

The analysis of gunshot residue from the hands of a shooter detects primarily trace amounts of primer residue. Because various types of ammunition have different primer components, two collection techniques are utilized to enable effective analysis.

Gunshot residue (GSR) deposits on the hands decline rapidly during the first hour after firing the weapon. In practice, GSR cannot be expected after six hours from a living subject. However in suicides, GSR can last many hours after the time of shooting. In either case, correct sample collection techniques are critical. Sampling for GSR should be performed on a live subject as soon as possible after the shooting. Ideally, samples should be taken immediately after contact with a subject in the field. It is important to contact the crime laboratory serving your agency in order to determine the type of gunshot residue collection kit they prefer for analysis. Generally, a single collection kit providing for SEM (adhesive disc type sampling) collection methods should be used. Some older kits have provisions for the collection of AA samples using swabs. With the advent of automated SEM analysis, these kits are generally not used.

CAUTION

The subject should not be allowed to wash or rub his hands prior to sampling. The subject should not be fingerprinted prior to sampling. Prior to any residue collection from the hands, visually examine the subject's hands and wrists. Record the position of any visible gunshot residue deposits (black smudges) or particles with a photo or sketch. Avoid contact with the subject's hand since this may contaminate them. Also, avoid cuffing the subject's hands behind his back, if possible, since this will tend to remove any GSR from the back of the hands.

CAUTION! DO NOT TOUCH the hands of the subject in the areas to be sampled for possible gunshot residues. If possible, thoroughly wash your hands and wrists before proceeding further to prevent any transfer contamination to the hands of the subject. Put on disposable plastic gloves provided before handling any sampling materials.

PROCEDURE FOR USING ADHESIVE COATED DISCS FOR SCANNING ELECTRON MICROSCOPE (SEM) ANALYSIS

1. Select a sample disc labeled RIGHT HAND. Remove the protective cover. Do not touch the disc to anything but the subject's hands.

2. To collect gunshot residues from a person's hands, the exposed adhesive surface of the disc is pressed firmly against the back right hand in a systematic pattern until the disc loses its stickiness. Do not slide or rotate the disc on the skin. Concentrate on the web area between the junction of the thumb and forefingers and down the forefinger.
3. After the adhesive surface has been used and the hand sampling is complete, reseal the disc in the container provided.
4. Repeat this process with the left-hand disc.
5. If the kit has disks for the palm lifts, use the same procedure outlined above for sampling the palms
6. Fill out ALL information requested on the GSR kit. Submit it to your local crime laboratory along with the appropriate submission form and a copy of the police report.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #16: SUBMISSION OF INKED FINGERPRINTS OF IDENTIFIED SUBJECTS

INTRODUCTION

If finger or palm print identifications have been established on cases submitted to the Latent Print Section of the California Department of Justice and no inked prints were submitted (or the submitted prints are older than one year), a current set of the inked finger or palm prints of the identified subject(s) should be forwarded to the Latent Print Section. Also include the appropriate IEB case number. Adherence to this procedure will ensure that:

1. The submitting agency can provide a witness to establish that the inked fingerprints belong to the specific suspect(s) in question.
2. An admissible court exhibit can be prepared, should this case go to the Superior Court or Grand Jury.
3. The suspect(s) in your case is (are) the same individual(s) whose inked fingerprints are on file at this Department and whose prints were used to establish the identifications mentioned in the attached report. (Quite often, due to the large number of prints on file at this Department, different individuals have the same names, DOB's and physical descriptions).

The prints submitted for this should be:

1. Properly inked and fully rolled.
2. Bear full name and description of subject.
3. Dated and signed by a member of the submitting agency who can testify, in court, as to the origin of the fingerprints.
4. Send to the attention of the Latent Print Analyst whose name appears on the attached IEB report, and to the following address:

   Latent Print Section
   Investigation and Enforcement Branch
   California Department of Justice
   P.O. Box 903437
   Sacramento, CA 94203-4370
   Attention: Latent Print Analyst _____

The Latent Print Section in Sacramento can be reached at Telephone: (916) 227-3797 Fax (916) 227-4079. In Fresno, call (209) 278-2982.

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #17: LATENT PRINT SECTION

INTRODUCTION

In many instances, an entire prosecution case will rest on a positive latent print identification. Without print identifications, many criminal cases would never reach the prosecution level. Experienced Latent Print Analysts who have substantial background in the identification field staff the Latent Print Section. All are qualified to appear in court and provide expert testimony in matters of latent print examinations. In addition, latent print analysts will provide field assistance in the investigation of major cases or where trained identification officers are not available to the local agency.

BFS latent print examiners use state of the art scientific methods to locate fingerprints on crime scene evidence. In addition to the classical black powder dusting methods, cyanoacrylate fuming, fluorescent dyes, high intensity lasers, and other chemicals are used to develop prints on difficult surfaces such as paper, plastic, Styrofoam, and duct tape. Sophisticated digital equipment is used to enhance the image quality of marginal latent prints and to document the evidence.

SUBMISSION OF LATENT PRINT EVIDENCE

Latent Print Analysts conduct latent print examinations and comparisons, not by criminalists. For this reason all packages shipped to the Bureau containing latent evidence only, should be marked "Attention: Latent Print Section."

MARKING OF EVIDENCE

All evidence packaging should be marked, sealed, and signed in such a manner to detect any breaking of the seal, just as with any other type of physical evidence.

Lifted, developed latent imprints should also be marked or sealed in marked envelopes.

When photographs are taken of developed latent impressions, some type of identifying mark should be placed near the print and this mark should also be photographed, so that it will show on the negative. If a 1:1 fingerprint camera is not used a ruler or some other item should be included in the photograph to show the amount of magnification.

PRESERVATION OF EVIDENCE

In all cases it is of the utmost importance to prevent contamination of latent print evidence by subsequent handling which can damage those prints already present.

Most fingerprints submitted will be on paper, glass, metal, or other smooth surfaced objects. When articles, which may contain latent fingerprints, must be picked up, they should always be touched as little as possible, and then only in areas least likely to retain identifiable latent imprints, such as where the surface is very rough.

While gloves or a handkerchief may be used to pick up items of evidence, any unnecessary contact should be avoided. Although this method of handling exhibits will prevent leaving additional prints on the articles, the gloves or cloth used may destroy prints originally present unless great care is exercised.

Large articles containing latent impressions such as glass, metal articles, and firearms should be placed on wood or heavy cardboard and fastened down firmly with string or wire to prevent shifting and contact with other objects in transit. Where such evidence is to be submitted frequently, a peg board should be obtained on which wooden pegs can be moved as desired to surround exhibits and keep them from moving. Bottles and glass can be placed vertically on a board and placed in the bottom of a box. The base of the battle can be surrounded with nails to hold it in place and the mouth can be either inserted through a hole in a piece of cardboard or held in position with a wooden board nailed to the lid of the container.

Papers and documents containing latent prints should be placed individually in manila envelopes or plastic containers. Such containers can be placed between two sheets of stiff cardboard and wrapped or placed in a box for mailing.

If the object containing the fingerprints cannot be removed or submitted to the latent print section, dust the prints with suitable developing powers and lift with latent lifting tape. Lifted prints can be placed on black or white cards for contrast or on transparent backing material.

COMPARISON PRINTS

If the investigator knows any suspects, submit clear rolled fingerprints and palm impressions of such individuals (see PEB 16). If these cannot be obtained, advise the latent print section of the full name, CII or booking number if possible, and the description of the suspect. Although a file of palm impressions is not maintained in the Department, this information will permit a search of the DOJ files for a fingerprint record of the suspect. If his fingerprints are on file they can be used for preliminary comparisons with any latent imprints developed. If there are no known suspects to the investigator, submit to the Automated Latent Print Section (ALPS).

Submit fingerprint cards on any other individual who may legitimately have handled the objects to be examined whether before or after the crime was committed. Include fingerprint cards of any investigators who may have accidentally touched the exhibits. This will permit the rapid elimination of any latent impressions found which were made by such individuals.

MAILING ADDRESS: California Department of Justice
Bureau of Forensic Services - Latent Prints Section
P.O. Box 903337
4949 Broadway, Room F-163
Sacramento, California 94203-4370
Telephone: (916) 227-3797 Fax (916) 227-4079

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #23: DOCUMENTATION OF SHOE AND TIRE IMPRESSION EVIDENCE

INTRODUCTION

A suspect may be associated to a crime scene by impressions/imprints left behind by the suspect's shoes and/or vehicle tires. A comparison of the crime scene impression/imprint can result in an identification of a shoe or tire. Impression/imprints can be found in soil, snow, on counters, tile floors, doors and paper. The evidentiary value of a comparison usually depends upon the quality of the impression or imprint and the manner in which it is recorded.

PHOTOGRAPHY

As with all evidence, overall photographs should be taken using a standard format lens showing the impressions/imprint in relation to the other features of the scene.

Photography is the most valuable way of collecting impression evidence for later comparison. It is critical that distortions are minimized by adhering to the following:

- Impression photography requires the use of a tripod and detachable strobe.
- The photo must include a scale or tape measure and identifying information (case number, item number, north arrow and date). These items must not be within or interfere with the impression. It is important that the scale be placed at the same depth as the impression.
- The camera must be mounted on the tripod directly over the pattern with the film plain parallel to the pattern. If the impression is on an incline, the camera must be adjusted so the back of the camera is at the same angle as the impression. If in a lighted environment, create a shadow over the pattern. Using the detachable strobe, light the pattern at a 450 angle or less from a minimum of four different directions. The less depth to the impression, the more acute the light angle should be. The impression, scale and identification information should fill the frame. The tripod may need to be inverted so that the legs do not interfere with the photograph.
- A tire impression should have the entire length of the tire's circumference (approximately 8 feet) photographed if available. A flat tape measure is placed alongside the entire length photographed. Overlap the frames by as much as 20%. No more than 2 feet of impression should appear in each frame.

Submit all photographs regardless of their apparent quality, 35mm or larger color film is adequate. Instant or auto-focus cameras produce photographs that are not suitable for comparisons.

After the initial photography, carefully remove any vegetation or stones that may have fallen into the impression **after** it was made. Any debris that was pressed into the soil with the impression should not be disturbed. Photograph again.

CASTING

After photography, casting may be performed to document the impression three-dimensionally. The decision to cast is affected by the soil conditions. Coarse soils do not lend themselves well to casting. Impressions in fine humus soil and even snow are excellent candidates for casting. The recommended casting materials are Dental Stone, Traxtone or Diecast. These proprietary products are superior to plaster in the amount of detail retained, ease of preparation, short setting time and no need for borders or reinforcements. Most companies supplying fingerprint identification supplies also carry casting materials.

The Dental Stone is mixed in the proportion of 1 lb./6 oz. of water and Diecast 1 lb./5 oz. of water. It is handy to preweigh one pound portions into large ziplock bags. Traxtone is prepackaged and takes 7 oz. of water to mix in its one-gallon ziplock bag. Add the water and mix thoroughly until the consistency of a thick milkshake is achieved. Pour the mixture from a height no greater than 3 inches as not to disturb details in the impression. The cast should be approximately 3/4 inch thick to prevent easy breaking. The material requires 20-30 minutes to set. Mark the backside of the cast with identifying information. Do not remove any soil adhering to the cast after recovery. Place each cast in a sturdy box for transportation. Spray impressions in snow with Snow Print Wax before pouring mixture. This product is also available from companies that carry fingerprint identification supplies.

HARD SURFACE IMPRINTS

Hard surface or two-dimensional imprints may be found on doors, counters, tile floors, paper, cement, windowsills, etc. They generally include two types: 1) voids in the pattern created by the surface material, e.g. dust, adhering to and being removed by the shoe/tire and 2) the deposition of material from the shoe/tire, such as blood, dirt, oil, etc. Again, photography is the most valuable way to document the imprint (see photography section). If possible, submit the entire item bearing the imprint document. If that is not practical, the imprint may be lifted using a commercially available print lifter. An electrostatic dustprint lifter or gel print lifter may be employed. Avoid using makeshift print lifting materials such as cellophane or tape.

ENHANCEMENTS

Laboratory personnel may provide chemical enhancement techniques for imprints in blood. Photographs should be taken prior to any enhancement attempts.

Dusting any type of residue imprint with latent finger print powder is not generally recommended.

However, it may be worth trying as a last resort.

Alternate light sources such as UV and laser may enhance visualization and photography, especially with imprint evidence.

TEST IMPRESSIONS

Suspect's shoes or tires should be collected as soon after the incident as possible to minimize the amount of change to the tread or sole through additional wear.

Test impressions from shoes will be made at the laboratory at the time of comparison. If shoes are to be examined for soil, glass, fibers, etc., each shoe should be individually packaged to avoid contamination.

It is recommended that the sole patterns of family members, law enforcement employees and other personnel present at the scene be documented for elimination purposes. Companies that carry fingerprint identification supplies also provide products that can produce actual size (1:1) test impressions. Photography is also appropriate if a ruler is included in the photograph.

Tires should remain mounted on the suspect vehicle such that position, wear and load duplicate the conditions at the time the evidence impression was produced. The vehicle may be trailered to the laboratory for obtaining tire test imprints.

A trained investigator may obtain the tire test imprints in the following manner:

1. Use a smooth, clean flat surface such as concrete, of appropriate length.
2. Drafting film with a width of at least one foot is affixed to cardboard. Drafting film is a transparent plastic that may be purchased at any drafting supply company. Prepare several lengths sufficient to document the entire circumference of the tire (approximately 8 feet).
3. Mark the **sidewall** of the tire into sections. The sections are defined by the location of the wear bars. Label each section (A, B, C, etc.).
4. Using a gloved hand, cover the tread with a **thin** film of Vaseline. Too little Vaseline will result in incomplete documentation. Too much Vaseline will result in filling in of fine details of the tread pattern.
5. Line up the drafting film attached to the cardboard in front of Vaseline-covered tread. Slowly roll the tire either forward or backward making an imprint on the film. As you roll, mark the cardboard with the corresponding sidewall sections and direction of roll.
6. Label each board with the position in which the tire was mounted on the vehicle (right front, left rear, etc.).
7. Develop the Vaseline "print" with black magnetic powder.
8. Spray the entire test impression with lacquer to help prevent smudging.

Roll the other three tires similarly.

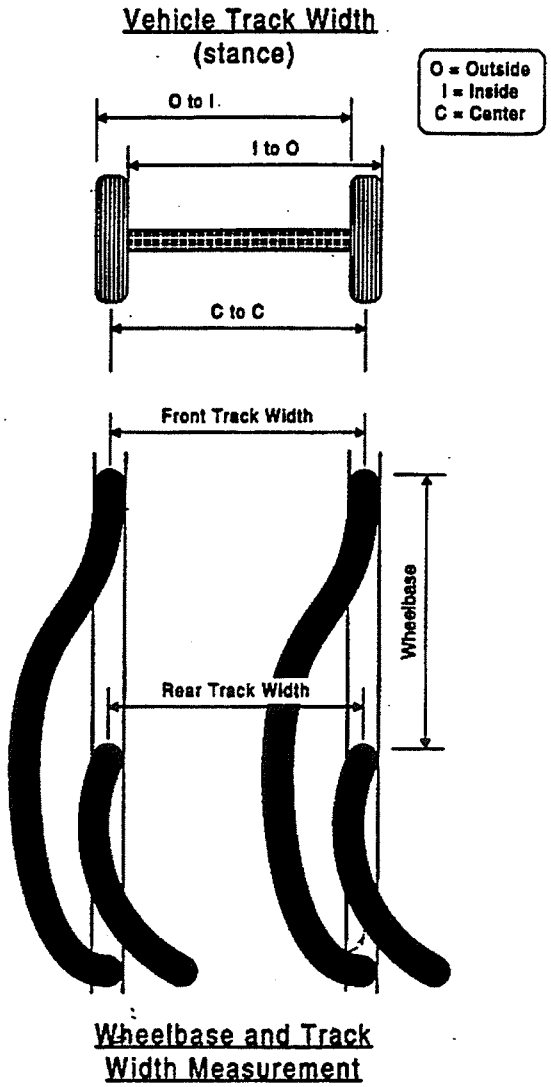
VEHICLE TRACK WIDTH AND WHEELBASE

Crime scene measurements of the vehicle track width and/or wheelbase may be searched against a database to provide a fist of vehicles that may have left the tire impression. Imprints requests to search the database using the measurements obtained may be made directly to the California Department of Justice Riverside Criminalistics Laboratory at (909) 782-4170 or through your local laboratory.

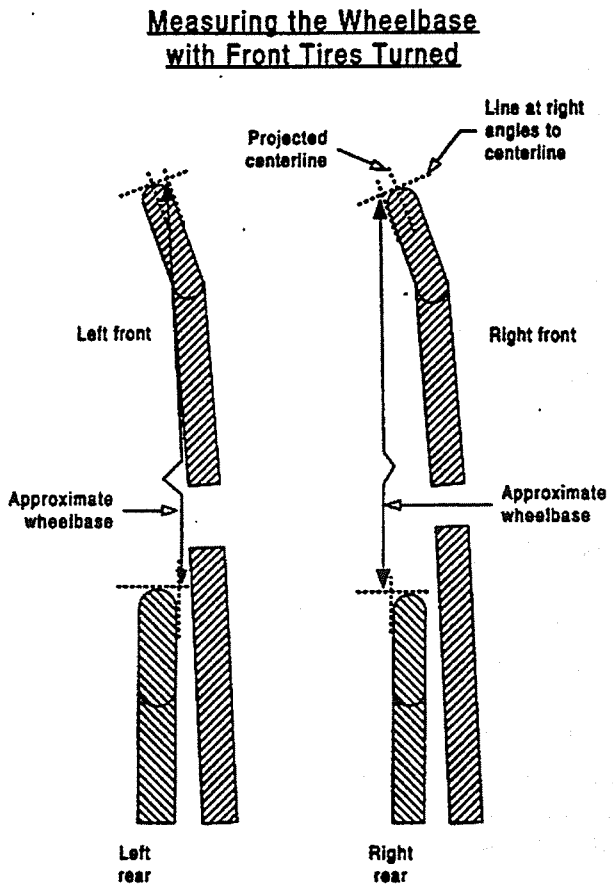
The track width of a vehicle is the distance between the center of the tire mounted on one side of the vehicle to the center of the tire mounted on the opposite side of the vehicle. The distance is most easily measured as the distance between the outside edge of the left tire impression and the inside edge of the right tire impression (see diagrams). The front and rear track width measurements may be different.

The wheelbase of a vehicle is the distance between the center of the front axle and the center of the rear axle. The distance is most easily measured as the distance between the leading edge of the front tire impression and the leading edge of the rear tire impression (see diagrams).

MEASURING TRACK WIDTH AND WHEELBASE



Wheelbase and Track Width Measurement



TIRE TRACK INFORMATION

INCIDENT NUMBER: _____

INCIDENT NAME: _____

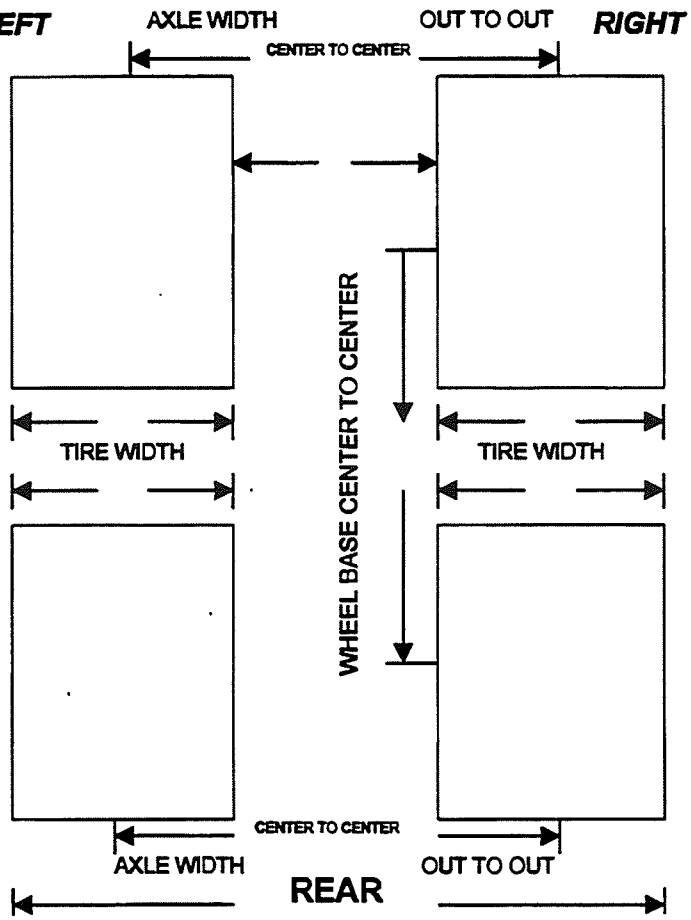
DATE: _____

INVESTIGATOR: _____

FRONT

SKETCH TREAD PATTERN

NOTE:
Photograph
Full Tire
Rotation Also.



REMARKS

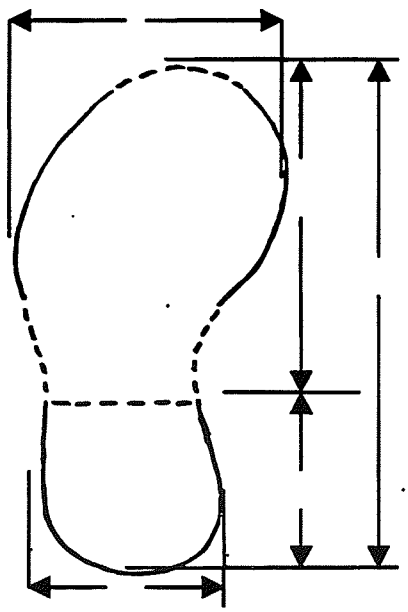
SHOE PRINT INFORMATION

INCIDENT NUMBER: _____

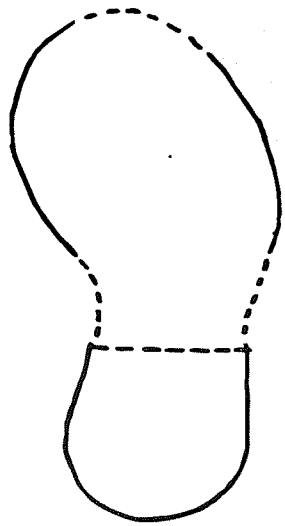
INCIDENT NAME: _____

DATE: _____

INVESTIGATOR: _____



PATTERN _____
BASIC TYPE _____
STRIDE HEEL TO HEEL
_____
GROUND TYPE _____
DRY___ **WET**___ **SNOW**___
OTHER _____



LEFT **RIGHT**

REMARKS: _____

_____

_____

CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

PEB #27: TOOLMARK EVIDENCE COLLECTION

INTRODUCTION

A toolmark is any impression, scratch, gouge, cut, or abrasion made when a tool is brought into contact with another object. Toolmarks can take the form of a negative impression (stamping type) or abrasion (friction type) mark. Some marks are combination of both features. Laboratory examinations and comparisons of tools from a suspect, with toolmarks recovered from a crime scene, can often provide conclusive evidence to link a suspect to a specific crime.

SPECIAL PRECAUTIONS

Doors, windows, or other openings with hinged or sliding doors should not be opened, closed, or handled in any way that might compromise latent fingerprints. These usually occur near the points of entry or exit. Investigators should also take special note of any broken, forced, or cut locks, latches, or bolts in the immediate area. The tool should NEVER be fitted into the impression to see if it could have made the mark.

PHOTOGRAPHY

Two types of photographs are needed for courtroom identification.

1. An over-all photo depicting the entire object which bears the toolmark.
2. A close-up photo showing the detail of the toolmark. This close-up is for identification and orientation only and cannot be used for actual comparisons.

Photographs should show the physical location and arrangement of the door, window, etc. bearing the mark. These can reveal the direction of tool use and whether the tool is physically capable of making the mark. A scale/ruler should also be included in these photographs.

RECORDING TOOLMARK EVIDENCE

Toolmarks should be completely documented before removal or casting. Notes and sketches must accurately reflect the position of all toolmarks to a fixed reference point, and the height from the floor or the ground.

TRACE EVIDENCE

Toolmarks should be examined carefully for any trace evidence. First type of trace evidence to be considered is latent prints. Proper processing of latent prints is preceded by a careful examination for any loosely adhering particles of evidence. These may be either removed or separately packaged or avoided in the application of fingerprint powder (applying and removing powders can destroy trace evidence). Toolmark evidence should be packaged so as not to subject it to damage or loss of trace evidence.

TRACE EVIDENCE REMOVED FROM THE OBJECT SURFACE

On painted surfaces bearing a toolmark, sample scrapings of the paint should also be submitted to the laboratory. Paint may not be readily seen adhering to the tool; however, microscopic examination of the tool may reveal minute particles having evidentiary value. (See PEB 5/84 for procedure on paint recovery). When a toolmark is on a surface that cannot be removed entirely, such as a large heavy metal object, samples of the metal should be obtained and submitted as reference standards. Particles of metal may adhere to the tool in addition to Paint and both may be analyzed and compared.

Flakes of adhering paint might be lost from the tool while in transit to the laboratory; therefore, a plastic bag should be taped over the end of an object to prevent loss or contamination of trace evidence.

REMOVAL AND MARKING OF EVIDENCE

Any items removed as evidence should be clearly marked with case number, initials, and date of removal. The evidence should also be marked to show the inside or outside; top, or bottom; and the surface area bearing the toolmark. Use a felt tip pen or include a separate drawing with the submitted evidence. Many objects bearing toolmarks that are detached on forced entry can be submitted directly.

This includes segments of window or door molding, window or door sill, latches, bolts, locks or doorknobs. Where doorknobs are twisted, note whether anything obstructs access to the knob from either side (posts, door set-back).

If the mark appears on items too large to be sent to the laboratory, it may be possible to remove the area containing the mark. If the object bearing the toolmark is removed, a sufficiently large piece of the surrounding surface area should be included to prevent damage to the mark through bending, splintering or breaking.

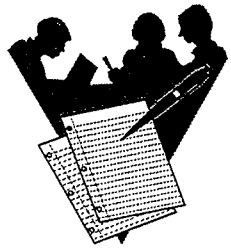
Any small removable item such as a doorknob, latch plate, or lock, should be marked by the investigator showing the top and front of the item as it was positioned before removal.

CASTS

If an actual item cannot be submitted for toolmark examination a cast can be made. A suitable casting material is MIKROSIL (Distributed by Kinderprint Co. P.O. Box 16, Martinez, CA. 94553). This is a two-part substance, which reproduces the fine detail needed for microscopic comparison. Two speeds of hardener are supplied in the casting kit. The SLOW Hardener is suitable for normal casting. The FAST hardener is used for casting in very cold climates. Complete mixing of the casting material and hardener is essential. A properly mixed portion will be workable for about 1-2 minutes and the cast can be removed in about 10 minutes. A hardened mikrosil cast cannot be permanently marked with a pen; therefore, the cast must be placed in a suitable container which can be appropriately marked with item #, location, date and name of person making the cast.

PACKING OF TOOLMARK EVIDENCE

Any object bearing a toolmark should be handled and packed in such a manner as to prevent any further contact with objects that could alter and therefore compromise the original markings. For further information contact your local Criminalistics Laboratory.



ACTIVITY SHEET 4-3-1

FINGERPRINT CARDS

TIME FRAME: 0:30

MATERIALS NEEDED:

- FBI fingerprint cards
- Ink pad
- Ink with roller
- Paper towels
- Soap

INTRODUCTION:

This activity provides you with the opportunity to practice the techniques of obtaining fingerprints from an individual.

DIRECTIONS:

1) Work in two-person teams.

2) Fingerprint your partner and complete the information portion of the fingerprint card.

3) Obtain required personal information from your partner's driver's license.

ACTIVITY SHEET 4-3-2

LATENT PRINTS ON ALUMINUM CANS/GLASS BOTTLES

TIME FRAME: 0:30

MATERIALS NEEDED:

- 3"x5" print cards
- Aluminum can or glass bottle
- Camera, 35 mm color print film
- Evidence container (paper bag)
- Fingerprint powder
- Lifting tape
- Make-up brush or cotton balls
- Paper bag

INTRODUCTION:

This activity provides you with the opportunity to practice lifting latent prints from a round object.

DIRECTIONS:

1) Take a photograph of your aluminum can or glass bottle before it is moved.

2) Dust the can or bottle to expose fingerprints.

3) Take a photograph of the exposed fingerprints.

4) Lift latent prints with tape.

5) Affix tape to a 3"x5" print card.

6) Properly identify and place the can or bottle into evidence.

ACTIVITY SHEET 4-3-3

LATENT PRINTS ON FLAT GLASS SURFACE

TIME FRAME: 0:30

MATERIALS NEEDED:

- 3"x5" print cards
- Camera, 35 mm color print film
- Cotton balls
- Fingerprint powder
- Flat glass surface (window)
- Lifting tape
- Make-up brush or cotton balls

INTRODUCTION:

This activity provides you with the opportunity to practice lifting a latent print from a flat surface.

DIRECTIONS:

1) Dust a flat glass surface (window) with fingerprint powder to expose any fingerprints.

2) Take a photograph of the exposed fingerprints.

3) Lift latent prints with tape.

4) Affix tape to a 3"x5" print card.

5) Properly identify the latent print.

ACTIVITY SHEET 4-3-4

FIELD TEST FOR FLAMMABLE VAPORS

TIME FRAME: 0:30

MATERIALS NEEDED:

- Aluminum foil or pie pan
- Camera, 35 mm color print film
- Dirt
- Gasoline (1 gallon)
- Matches

Plastic water bottle for extinguishment

INTRODUCTION:

This activity provides you with the opportunity to learn the technique of detecting the presence of a flammable liquid in soil.

DIRECTIONS:

1) Place a ¼" layer of dirt on the foil or in the pie pan.

2) Pour approximately 3 tablespoons of gasoline on the dirt and allow it to soak it.

3) Take a photograph of the vapor test (before ignition).

4) Scratch the surface of the dirt to release trapped vapors.

5) Ignite with a match.

   CAUTION: Use a small amount of gasoline. Observers must stand away from the demonstration before throwing the match into the vapors. Store the gasoline can out of the test area.

6) Take a photograph of the vapor test after ignition

7) Document the test as though it was being conducted at a fire scene to determine the presence of flammable vapors.

ACTIVITY SHEET 4-3-5

TIMED ROPE/TWINE

TIME FRAME: 0:30

- MATERIALS NEEDED:
- Aluminum foil or pie pan
- Camera, 35 mm color print film
- Bucket/pail of water
- Hemp rope or 1/8" cotton twine (4"-5")
- Matches
- Ruler
- Watch

INTRODUCTION:

This activity provides you with the opportunity to learn the process of a time delay, recognize the remains, and practice skills of documenting.

DIRECTIONS:

1) Cut a 4"-5" length of rope/twine and mark at 1" intervals.

2) Ignite the rope/twine.

3) Determine the burning time per inch of rope/twine.

4) Describe the item burned and the condition under which it was burned (weather, pan, etc.).

5) Measure and document the residue after burning.

6) Take a photograph of the evidence.

7) Empty residue into water bucket to ensure extinguishment.

ACTIVITY SHEET 4-3-6

PHOTOGRAPH OF UNBURNED DEVICE

TIME FRAME: 0:30

- Ruler or yard stick
- Tape
- Cigarette
- Book of matches
- Camera, 35 mm color print film
- Tripod (if available)

INTRODUCTION:

This activity provides you with the opportunity to document a device at the scene before collecting it as evidence.

DIRECTIONS:

1) Take two photographs of an unburned cigarette/matchbook incendiary device.

   a) Take both photos at the closest possible distance and within the limitations of the lens.

2) Prepare a written report that documents the procedure, camera settings, and measured distance from the lens.

3) Submit written report and both photographs to the instructor.

4) Be prepared to present their report and photos to the class.

ACTIVITY SHEET 4-3-7

INCENDIARY DEVICE

TIME FRAME: 0:30

MATERIALS NEEDED:

- Aluminum foil or pie pan
- Camera, 35 mm color print film
- Cigarette
- Evidence container (paper bag) with cotton padding
- Lab request form (DO3)
- Match book or wood matches
- Plastic water bottle (for extinguishment)
- Rubber bands
- Ruler
- Straw
- String
- Tape

INTRODUCTION:

This activity provides you with the opportunity to learn the process of a time delay, recognize the remains, properly document the device, and practice skills in recovering the evidence.

DIRECTIONS:

1) Place some straw on to foil or pie pan.

2) Construct a time-delay incendiary device and place it on the straw.

3) Measure from the end of the cigarette to the match to determine burn time.

4) Ignite the device.

5) Take a photograph of the burned evidence.

6) Prepare a written report describing the burned evidence.

7) Properly identify and place the device into evidence.

8) Prepare a lab request for analysis.

ACTIVITY SHEET 4-3-8

PHOTOGRAPH WITH MIRROR

TIME FRAME: 0:30

- Two small mirrors
- Aluminum foil
- Camera, 35 mm color print film
- Tripod (if available)
- Vehicle or gas/plumbing pipe

INTRODUCTION:

Often an investigator cannot get a direct shot of an item or needs additional light to make the photograph clearer. This activity provides you with the opportunity to photograph evidence under these circumstances.

DIRECTIONS:

1) Take two photographs of the hidden side of an engine part (fuel line, etc.) or plumbing using a mirror.

   a) First photo will use available light.

   b) Second photo will use light reflected by the foil or another mirror.

2) Prepare a written report that documents the procedure and conditions under which the photos were taken.

3) Submit written report and both photographs to the instructor.

4) Be prepared to present your project to the class.

UNIT 5: INTERVIEWING

INTRODUCTION TO INTERVIEWING

Investigators frequently confuse interviews with interrogation. Interviewing is the questioning of a person who is believed to possess knowledge that is of official interest to the investigation of an incident, an individual, or fact. Interrogation is the formal questioning of a criminal suspect in a custodial setting. All interrogations must be conducted within the guidelines established by the Miranda decision.

CONFESSIONS AND MIRANDA RIGHTS

Generally, the officer will interview the suspect after an arrest in the field. When in doubt as to whether or not to interview, do it. A suspect's statement, even if it is a lie, is usually very helpful to prosecution. Even if all the suspect does is deny that he or she committed the crime and offers an alibi, the alibi ties the suspect to a certain defense strategy.

> ***Example: Officers interview a rape suspect, who says he was nowhere in the area and was with a certain person at the time of the rape. Later, when his attorney suggests that the best strategy is to admit the act and try to prove consent, the suspect is caught in a lie. He is stuck with his story.***

Begin the interview as soon as possible, before the suspect has several hours to think of a good defense. When you have the suspect's statement, whether it is a confession or an alibi make sure you can prove it. Get a signed statement, tape record the statement, use another officer as a witness, etc.

"Leave it to the detective" theory. The problem with this is that it is usually several hours before a detective will be available. If your department has a detective on duty, and your department's policy is to leave it to the detective, fine. Otherwise, do it yourself. If the suspect is not interviewed until he or she hires an attorney, your chances of the suspect agreeing to talk to you are very slim.

CONFESSIONS AND ADMISSIONS

The rules for confessions and admissions apply to peace officers and private persons alike. It makes no difference whether the suspect is being interviewed by a private person, a peace officer, security guard, etc. The "Miranda" rules, however, apply to peace officers only. People vs. Haydel, 12 C3d 190 (1974).

The "Voluntariness" Standard

Above all else, confessions must be proven to be voluntary. Voluntariness of a confession is decided by the judge, without the presence of the jury (405 Ev.C). For a confession to be voluntary, it must be proven free of all of the following:

Threats

Any confession obtained as the result of threats will be ruled inadmissible.

> ***Example: Threatening to prosecute a juvenile as an adult, unless he confessed, would make the confession inadmissible. In re: Roger G., 53 CA3d 198 (1975).***
>
> ***Example: Threats to arrest a near relative if the suspect did not confess would make the confession inadmissible. People vs. Rand, 202 CA2d 668 (1968)***

Coercion

Physical or mental coercion would not be allowed. Brown vs. Mississippi, 297 U.S. 278 (1936). Here, the officer must be acutely aware of the physical circumstances, under which the suspect is interrogated. For example, if several officers were standing around the suspect, the court might say the circumstances constituted "mental coercion."

Promises

Any promise of leniency in return for a confession would be ruled inadmissible. People vs. Johnson, 32 CA3d 432 (1974). Similarly, where the officer promised to release the suspect on bail if he confessed, it was held to be a promise, People vs. Terry, 38 CA3d 432 (1974). Making a promise in return for a confession is not allowed, but merely "urging" a suspect to confess is okay.

> ***Example: Lira raped and brutally beat his sister. During his interview, officers told him that unless he confessed, a trial could be held, and his sister and relatives would be called to testify. But if he confessed, he was told a trial could be avoided. The confession was upheld. The officers were merely threatening to do that which they could legally do. People vs. Lira, 119 CA3d 837 (1981)***

Example: Police "encouraged" a suspect to confirm his version of the case by "telling the truth." The suspect confessed, but said in appeal that he felt "pressured" to confess. The court said "even though a person may feel pressured to answer, if he does not feel compelled to, the confession is admissible." People vs. Anderson, 101 CA3d 563 (1980). Quoting further from the Anderson case, "...yet in carrying out their interrogations, the police must avoid threats of punishment for the suspect's failure to admit or confess particular facts and must avoid false promises of leniency as a reward for admission or confession. It is apparent that when police interview a suspect, they must skate a fine line. They are employed to protect the public, and to solve crimes. They are authorized to interview suspects who have been advised of their rights, but they must conduct the interview without the undue pressure that amounts to coercion..."

Length of Interrogation

Naturally, the longer the interview, the more likely the court will be to rule that because of the extended time involved, the confession was inherently coerced. However, it is not the time, but whether the suspect exercised "mental freedom" in deciding to confess, that is determinative. A 15-year-old boy was interviewed for three and one-half hours regarding a murder. The court ruled it voluntary, since the boy exercised "mental freedom." In re: Anthony J., 107 CA3d 962 (1980).

Deception

In People vs. Watkins, the trial went something like this:

Question by defense to officer: "My client confessed to stealing the car only after you told him you found his fingerprints on the car. Is that correct?"

Answer by the detective: "Yes."

Question: "Did you really find his fingerprints there?"

Answer: "No."

Question (indignantly): "So that was a lie?"

Answer (coolly) "No."

Question: "Then what would you call it?"

Answer: "An interrogative aid."

In the Watkins case, 6C3d 119 (1970), the Supreme Court upheld the confession. In this, as in other similar cases, so long as the deception is not the type that will cause a person to confess to something he or she did not do, it will be admissible. Statements by officers such as, "We've got the goods on you. You might as well confess." have been held admissible although the officers had nothing. Similarly, confronting a suspect with untrue or "manufactured" evidence has been held admissible.

In short, using deception to induce a confession is okay, so long as it would not make the suspect confess to something he did not do.

> ***Example: In a case involving the shooting of a San Diego police officer, Steven McIntire, the suspect was given a hand-swab test to determine whether he recently fired a gun. The test showed nothing, but the officers told the suspect the test showed he had handled a gun recently, which was a lie. The suspect thereupon made a very damaging admission. The court held the admission admissible. People vs. Parrison, 82 Daily Journal D.A.R. 3035 (Nov. 19, 1982)***

The use of subterfuge by police officers is not necessarily impermissible because subterfuge per se is not the same as coercive conduct. People vs. Felix, 72 CA3d 879 (1977). Our Supreme Court has ruled recently that the courts will not exclude the defendant's voluntary statement that is the product of police deception. People vs. Hogan, 32 C3d 815 (1982).

In People vs. Walker, the suspect was told he probably was going to die from his injuries and so he might as well confess, although the officers knew the wounds were not fatal. His resulting confession was held to be admissible by the court. In re: Walker, 10 C3d 764 (1974).

Remember that the voluntariness of a confession is decided by a judge and cannot be submitted to the jury as a question. Jackson vs. Denno, 387 U.S. 668 (1964).

THE MIRANDA RULE

Background

In Miranda vs. Arizona, 384 U.S. 436 (6/13/66), Ernesto Arthur Miranda raped an 18-year-old girl. Ten days later, he was arrested and interviewed for two hours. He voluntarily confessed without the use of threats, coercion, or promises. He was convicted partly on his confession, and the conviction was

upheld by the Arizona Supreme Court. The case was reversed by the U.S. Supreme Court in a 5-4 decision. Chief Justice Earl Warren held that the new rule for a confession to be admissible, the "voluntariness" standard was not good enough. The suspect, if the interview was "custodial," must be advised of certain constitutional rights, and only after he made an "intelligent waiver" of those rights would the confession be admissible.

What this means then, is that if the officer forgets or advises the person but misses a technical word or two, the suspect may go free. In the dissent to the Miranda case, Justice White said in part, "... In some unknown number of cases, the Court's ruling will return a killer, a rapist, or other criminal to the streets and to the environment that produced him, to repeat his crime whenever it pleases him. As a consequence, there will not be a gain, but a loss in human dignity...the next victims are uncertain, unnamed, and unrepresented in this case..."

Miranda Rule for Adults

An adult ***must*** be advised of his or her constitutional rights ***before any questioning*** when all three of the following apply:

❶There Is Interrogation.

Interrogation means talking to persons with the purpose of using that which is said against them. It means questioning. Therefore, when someone walks up to the officer and begins talking about a crime they just committed, the officer need not stop them and advise them of their rights, since there is no interrogation. Everything the suspect says can be used against them. As the Miranda decision itself says, "There is no requirement that police stop a person who enters a police station and states that he wishes to confess to a crime, or a person who calls the police to offer a confession...voluntary statements of any kind are not barred by the Fifth Amendment and their admissibility is not affected by our decision here today."

The Rhode Island vs. Innis, 64 L.Ed.2d 297 (1980) and the U.S. Supreme Court ruled on the question of interrogation again. Here, Innis has robbed and killed a person, then hid the gun in a field occupied by retarded children. A conversation between two officers in the front seat of the police car as to what a shame it would be if the children found the gun, prompted Innis to confess the gun's whereabouts. The Court held that the conversation between the officers did not amount to an interrogation. Officers should not, of course, advise suspects of their rights if they do not intend to question them.

❷By Law Enforcement Officers

Private persons, including private security guards, do not have to advise suspects of their constitutional rights. Security guards should not, in any case, advise suspects of their rights, as they may

muddy the legal waters for the police when the police subsequently interview the suspect. In re: Dedorah C., 30 C3d 125 (1981)

❸When the Suspect Is In Custody

This is by far the most confusing area of the entire Miranda problem. Just what is "custody?" Some of the confusion is cleared up by the investigative function of the police officers investigating crime. General on-the-scene questioning as to facts surrounding a crime or other general questioning of citizens in the fact-finding process is not affected by our holding." Therefore, investigative questioning does not require the Miranda warning.

Again, quoting the Miranda decision, "...by custodial interrogation, we mean a questioning initiated by law enforcement officers after a person has been taken into custody or otherwise deprived of his freedom in any significant way." The implication is, of course, that there is such a thing as depriving a person of their freedom in an insignificant way, i.e., temporary detentions.

Temporary Detentions

Temporary detentions are not "custody" under the Miranda rule! Although a temporary detention is a seizure of the person under the Fourth Amendment and must be "reasonable," it is not custody under the Miranda rule. Therefore, officers who temporarily detain suspects in the field for brief questioning need not advise them of their rights. People vs. Haugland, 115 CA3d 248 (1981); Beckwith vs. U.S. 425 U.S. 341 (1976); People vs. Patterson, 88 CA3d 742 (1979), and numerous other cases.

"Focus of suspicion" is not the test of when a suspect should be advised of their rights. Some cases have mentioned the "focus of suspicion" test to determine whether or not there is custody, but this is an improper way to determine custody.

> ***Example: A police officer has probable cause to arrest a suspect, so he phones him, and questions him over the phone. Need he advise him of his rights? No, even though suspicion has "focused" on him as the only suspect in the crime. All the suspect has to do is hang up the phone to get rid of the officer. So, there is no "custody" under the Miranda rule, and no need to advise them of their rights.***

Procedure for Advising Suspects

When advising suspects of their rights, always advise them from your notebook, your "rights card," or other printed material that includes the admonishment. Advising suspects off the top of your head is very dangerous, as you may forget to advise them of one of their rights, and thereby lose your case. If subjects indicate that they know their rights and "waives" reading them, read them anyway. If you do not, you will lose the resulting confession.

Intelligent Waiver

Not only must you advise the suspect of their rights, you must later prove in court that the suspect understood their rights and that they intelligently waived those rights. Refusal to answer certain questions is not a waiver! You may continue the interrogation.

On reports, use exact words of the waiver. For example, when you ask if the suspect understood his or her rights, the suspect said "Yeah, sure." put those exact words on your report.

The younger the suspect, the more difficult it becomes to get a waiver. For example, if you have very young juveniles, you may want to not only explain their rights, but also have the juvenile explain them back to you.

Juveniles Per §625 W&I Code

You must advise juveniles of their rights when they are arrested, whether you want to interview them or not. You would not advise an adult of their rights unless you want to interrogate, but with juveniles, you must advise.

Once A Refusal, Always A Refusal

In People vs. Pettingill, 21 C3d 231 (1978), the Supreme Court held that once a person is advised of his rights and invokes his right not to talk, that's it! If you ask the suspect again in a few hours or few days later, and he confesses, it will not be admissible in court.

> ***Exceptions: 1) People vs. Lopez, 90 CA3d 711 (1979). If the suspect has been advised and refuses to waive his rights, and another officer who doesn't know that the suspect refused to waive his rights the first time later advises him, the confession to the second officer will be admissible. People vs. Webb, 83 CA3d 83, If the suspect changes his mind, and seeks you out, and tells you he has changed his mind, go ahead and re-advise him and take his confession.***

Emergency Exception: People vs. Willis, 104 CA3d 433 (1980). Willis murdered, kidnapped, and robbed a female. He was found in her car, with a gun, and her purse. He was advised of his rights, and refused to talk. The police kept up the interrogation anyway and he agreed to take the police to where he had dumped her. The defense sought to suppress his confession, the body (fruit of the poison tree), etc. The court held that in this sort of lifesaving situation, Miranda does not apply!

Subsequent Statement Problems

This area of law deals with the following problems: Suppose the suspect makes an incriminating statement without first being advised of her rights. Then, after being advised, she makes another confession. Will the second confession be admissible?

McCormick, the authority on evidence, seems to say yes. In his book, he says, "No court has held that subsequent statements are inadmissible simply by virtue of the fact that an earlier inadmissible statement was taken. And, Justice Jackson, speaking for the U.S. Supreme Court in U.S. vs. Beyer, 331 U.S. 540, said that, "After the accused has let the cat out of the bag by confessing...he can never get the cat back in the bag, being at a practical disadvantage. The secret is out for good...but the court has never gone so far as to hold that making a confession under circumstances which preclude its use, perpetually disables the confessor from making a usable one after those conditions have been removed."

It would seem, then, that a second confession after an inadmissible one could sometimes be admissible, if the suspect, after making an unmirandized confession, were removed in time and place before the second confession, so that he did not feel the pressure of the first confession.

Specific Problems with Various Welfare & Institutions Sections

A recent case involving juvenile confessions has interpreted and clarified some of the sections. Officers need not advise juveniles of any more rights than an adult. Officers do not need to ***advise*** juveniles that they have a right to speak to their parents before an interrogation.

W&I Code §627(a) requires an officer to notify the parents if the juvenile is taken to juvenile hall. The section does not require parents to be notified when the juvenile is taken to the police station in temporary custody.

W&I Code §627(b) states that a juvenile has the right to make two telephone calls, upon being taken into custody. The section does not require the juvenile to be advised of this right.

The case which discusses the above points, as well as other points of juvenile law, is in re: Michael J., 110 CA3d 835 (1980).

Use of Tape Recorder in Police Vehicle

It is permissible to tape record a suspect's confession to the officer, even if the suspect does not know that he is being recorded. It is also permissible to place a "secret" tape recorder in the police car, to record what one suspect says to another, when the officer is out of the car. The San Diego case upholding this is People vs. Crowson, 124 CA3d (1981).

Beheler Admonishment (1983) 463 U.S. 1121, 1125

A suspect can be interviewed in a police station without having to be Mirandized if you use the Beheler admonishment. During the course of your interview/interrogation, you may want to admonish the Beheler several times. You must make sure the suspect would not feel confined in a custodial situation, i.e., do not lock the door to the interview room. A good practice would be to leave the door open during the course of your interview. A sample Beheler admonishment follows.

SAMPLE ADMONISHMENT FORM

Case No. _____

STATE OF _____

ADDRESS _____

TIME_____ DATE_____ PLACE _____

ADMONISHMENT

Before asking you any questions, I will inform you of your rights.

BEHELER ADMONISHMENT

1) You are not under arrest.
2) You are free to leave at any time
3) You do not have to answer any of the questions I ask.
4) Do you understand what I have just told you?

Tell me your side of the story.

OR

Tell me what happened.

GLADYS R. QUESTIONNAIRE

To be used for all arrestees under 14 years of age. To be given after Miranda rights have been waived. If subject refuses to waive his rights, parent's answer below is adequate.

From Minor

1. Do you know the difference between doing what's right and what's wrong?

2. Give me an example of something that is right to do.

3. Give me an example of something that is wrong to do.

4. Do you go to school?

5. What have they taught you in school about it being wrong to

6. What has your mother or father taught you about it being wrong to

7. Does your mother or father punish you for doing something they have told you is wrong?

From Minor's Parents

1. Have you taught your child the difference between right and wrong?

2. Have you taught him/her that it is wrong to

3. Do you send your child to school?

4. Can he/she read and write?

5. Do you think your child knows it is wrong to

Note: Extra care should be taken in advising your subjects of Miranda rights. Determine that he or she knows the meaning of lawyer, judge, court, silent, appointed, etc. Indicate these explanations in their waiver.

UNIT 5: INTERVIEWING

TECHNIQUES OF INTERVIEWING

Just because you hear, does not automatically mean you listen. When you were a child, you were taught the two-part listen session by your parents -- "shut up and listen." Business studies show that we divide our business day in the following manner: 9% writing, 16% reading, 30% speaking, and 45% listening.

However, during our initial educational years we were taught just the opposite:

12 years on how to WRITE	8-12 years on how to READ	1-2 years on how to SPEAK	**0-6 months on how to *LISTEN***

Almost everything we do and learn on the job today is through listening. Yet, we receive very little training on how to listen. Active listening is the foundation of any interview. You have to concentrate and listen with your eyes as well as your ears.

THE INTERVIEW

The purpose of conducting an interview is to gather information from victims, witnesses, informants, suspects, or subjects, to gather facts about the incident, and to locate others that may have additional information.

1) Introduce yourself and provide identification to the interviewee.

   Ask the person being interviewed for their identification (i.e., driver's license) and record their name, address, and date of birth. Also, record their home and business telephone numbers.

2) Begin the interview by explaining the reason for contacting them. Gain their confidence. Encourage them to talk. Put them at ease. Maintain a business-like, but friendly, attitude. Do not present yourself as the "government official."

3) Conduct the interview in private and only interview one person at a time. If several witnesses have information about the incident, separate them and conduct the interviews away from others that may be listening.

You can explain that you only want the information that each witness can give you without any input from others. Question the witness thoroughly about whether the information was observed personally or if someone else told them the information.

Conduct the interview where the witness is comfortable and you will not be disturbed or interrupted. Try to limit the distractions.

List some common distractions found at a fire scene:

4) As an investigator or interviewer, you are the "gatherer of fact." Be courteous and polite. Provide as little information to the subject when you are presenting questions. Do not ask leading questions.

BAD example: "You did hear the engine's siren and air horn just before the crash didn't you?"

GOOD example: "What did you hear or see just before the crash?"

Avoid giving the witness any information about the incident. You want to gather information from the witness, not tell them everything that occurred.

BAD example: "Did you notice if the driver of the car that hit the fire engine had on a blue shirt or a ball cap?"

GOOD example: "Did you notice what the driver of the car was wearing?"

BAD example: "How long was the person's beard?"

GOOD example: "Did the person have any facial hair?"

Do not use information you obtained from one witness and pass it along to another in the form of a question. This provides them with information they may not possess.

5) Develop as much information as possible from the witness. Do not rush; take your time and allow the witness to talk. Use words that the witness can understand; do not talk above them. If a question comes to mind, do not interrupt and interject your question. Let the witness finish speaking and then ask your question.

   Do not jump around to various subjects until you have all the information the witness can provide in one area. Moving quickly to other subjects gives the impression that you were not interested in what was just said.

6) Avoid taking notes during the interview. If you have to take notes, make them very brief so as not to distract the witness. No one likes to feel like they are being taken verbatim. This will tend to cause the witness to "clam up."

   a) It is best to tape record the witness statement, but do it in a way so the witness is not constantly reminded of the recorder. Ask the witness if they would mind if you taped the interview so that you do not have to write so many notes and it will help you remember later what the witness said.

   b) A standard pre-interview instruction sheet is included at the end of this chapter that will assist you in opening a tape-recorded interview. It will also help to set some guidelines for the witness to prevent two persons speaking at the same time during the taped interview.

   c) Tape recordings can be invaluable to your investigation. Often on a follow-up interview, a witness will change their story. They will claim you misunderstood what they said originally. A review of the initial tape can clear up any misunderstanding and reveal that the person deliberately changed their first interview.

   d) A review of the tape recording will, many times, reveal important information that you missed during the interview. You may have been concentrating on your next question or thinking about a previous answer the witness gave and did not hear something else the witness said. A later review of the tape will usually provide you with additional information.

   e) Tape recordings do not have to be transcribed. You can use them to help refresh your memory while you write the report. A summary of the taped interview can be prepared to reflect the important information in the interview.

   f) Tape recordings of witness statements do not have to be saved if you prepare a synopsis of the interview from the recording. However, tapes of the interview of the subject or suspect, whatever the case, ***must be saved and should be transcribed.***

g) If you have a partner with you to help with the interview, have your partner stay back a little from you. Your partner can take notes and observe the "body language" of the witness.

7) If a law enforcement officer is not available to interpret for you, a disinterested party should be used. Obtain the full identification of this party just as though he or she were a witness.

   Instruct the interpreter to use only your words and not to add any of their own. Ask the interpreter to repeat the answer using the exact words of the witness, using quotes if necessary.

8) If drawings or sketchings are made by the witness to explain their point or to show directions, have them sign or initial and date each one. Ask them to do this at the end of the interview.

9) When a witness states they observed something, have them demonstrate where they were at the time of the observation. You should next place yourself in the same position and see if, in fact, you can observe the same information or view that the witness did. Oftentimes, you can determine that the witness could not have seen what they said they did. They may simply be relaying information they obtained from someone or they may be supporting someone else's story.

10) The position the witness was in may be critical to the investigation later. If it appears to be pertinent, take a camera with you to the location and photograph the view from where the witness said they were standing. It would be important to do this within a reasonable time after the incident. Otherwise, the field of view may change due to seasons. Leaves may have fallen off the trees or may have grown and filled in the branches.

11) In all investigations, it is important to re-enact or reconstruct the events that led up to the incident to get an appreciation of what happened. Reconstruction can reveal if events could have happened as some of the witnesses said they did.

12) Consider the time of day and day of week of the event in order to recreate the events as close as possible to when they occurred. Take in to account the weather conditions on the date of the event.

THE INTERVIEWEE

Listen

Be patient and listen to not only what is being said verbally, but also what is not being said. Observe the physical movements of the witness, otherwise known as "body language."

People lie for various reasons: to please themselves, to please you, to lie through omission.

What other reasons may cause people to lie?

Body Language

If you are interviewing someone that may be involved in the incident and that person may want to hide this fact, you need to pay particular attention to his or her body language. Determine the usual or normal physical movements of the person by asking routine questions. When your inquiry starts to focus on the incident and you notice changes in the person's physical movement, pay particular attention to this.

Persons under stress will exhibit involuntary movements. You can capitalize on these to determine if someone is lying to you or to ascertain why they are under such stress.

- Crossing legs
- Difficulty swallowing
- Sinking in chair
- Bouncing Adam's apple
- Moving lips, but no voice
- Finger tapping
- "Piling sand"
- Dry mouth/throat
- Loss of voice
- Adjusting clothing
- Inspecting nails
- Perspiration
- Twitching
- Picking lint

When several body movements occur in response to your question, this is referred to as "clustering." This clustering indicates a high degree of stress or that a lie has just occurred. Note this reaction and either come back to your question later or target-in on the subject matter in your question that caused this stress reaction.

Movements of the limbs help reduce stress in the witness. The witness may also sit in a "flight position." One foot back under the chair, the other foot in front of the chair ready to sprint or run from the room.

Playing with objects such as purses, paper clips, pens, papers, etc. will tend to distract from the interview.

Verbal Signals

After you have determined the normal speech patterns and habits of the subject, you may notice distinctive changes or phrases when they answer a question.

- Says "no" and changes position.
- Says "no" before the question is asked.
- Says "no, no, uh-uh, not me, no, no, no."
- Nods head "yes," but says "no."
- Invokes religion - "... a stack of bibles," "may lightning strike me if I'm lying," "... on my mothers grave."
- Takes a long pause before answering "no." A person that is lying will stall for two reasons. They are asking themselves, "Should I lie?" and if so, "What story should I make up?"
- Becomes indignant.
- Feigns an illness or pain.
- Tells you how sick they have been.
- Answers your question with a question. "Why would I do a thing like that?" "Who me?' "What would I have to gain by lying?" Or, repeats your question.
- Attempts to validate their honesty. "Anyone will tell you I wouldn't do that." "Ask anyone. I'm not that kind of person." "I wasn't brought up that way."
- Expresses a weak denial. "You've got to be kidding." "I don't know what you're talking about." Or, it may not be a verbal response, just shaking the head in denial.

Supporting Props

Some persons will bring a variety of supporting props to the interview. This is a signal of guilt, lying, or extreme stress.

- Gets out a bag of medication and places them on the table in front of you.
- Brings their bible to the interview.

- ❖ Arrives at the interview and sets up a tape recorder.
- ❖ Brings in a large volume of documents and paperwork.

THE INTERVIEWER

Avoid the impression that you are trying to obtain a confession. You are there to seek the truth and the facts. Remain seated and calm. Pacing and other movements send a message that you are impatient or nervous. Maintain control over your emotions. If the subject upsets you, do not allow them to know this.

Treat the subject with decency and respect. Sympathize with the subject when it is appropriate. Minimize the event. Be friendly and open. Care and a sympathetic approach may help the witness "get it off their chest." If it appears the subject has something to say, but is hesitant about it, move in to the subject's space.

Tactics

When you are questioning a person that may have direct involvement in the incident and they are denying their involvement, do not present them with accusatory statements. Get as much information about the incident as possible.

- ❖ Blame the victim or other accomplices.
- ❖ Place the subject at the scene.
- ❖ When they lie, do not challenge them with the lie. This will come later when enough lies have been developed.
- ❖ Use flattery.

How would you flatter them?

Guilt Unknown

Make sure you have all the facts available relating to the incident. Know and understand the details of the day of the incident.

- ❖ What was driven?
- ❖ Who drove the vehicle?
- ❖ Who else was in the vehicle?
- ❖ Where did you go?
- ❖ Determine specific time frames, locations, and other details in the order they occurred.
- ❖ Develop a timeline or sequence of events.

If you believe the person is involved and for some reason may deny it, ask questions in a manner that implies the answer is already known and you are just confirming it with them.

- ❖ "I'm told you were facing away when the accident occurred."
- ❖ "John said you were asleep when it happened. What did you see when you awoke?"
- ❖ "It is my understanding that the driver of your vehicle was reaching into the back seat just before the accident. What was he looking for?"

Guilt/Involvement Known

When the subject's guilt or involvement in the incident is known and the person is denying it, use the following tactics.

- ❖ Display an air of confidence in the subject's involvement.
- ❖ Point out evidence and other circumstances that indicate the subject's involvement.
- ❖ Call attention to the subject's physiological and psychological symptoms.
- ❖ Sympathize with the subject by saying, "Anyone else under similar circumstances would have done the same thing."
- ❖ Reduce the subject's guilty feeling by minimizing the moral seriousness of the offense.

- Point out the possibility of exaggeration on the part of the accuser or victim, or the exaggeration of the nature and seriousness of the offense itself.
- Seek an admission of lying about some incidental aspect of the incident.
- Show the subject how futile it is to continue to deny their involvement.

If the subject continues to deny involvement, offer a lesser degree of involvement.

- "I know you didn't want to do this, but you went along with what everyone else did."
- "You didn't intend for this to happen. It just got carried away."
- "Was it your idea or his to do this?"
- "What would you do different if you had to do it all over again?"

Subject Is Lying

A very effective way to break down a subject's story or lie is to 1) Determine ten specific activities of the subject; 2) Have the subject repeat the events backward; 3) Start in the middle and have the subject repeat the events both ways.

When someone lies about events, they cannot remember the sequence, and they tend to trip themselves up. A truthful person knows the events occurred and does not have a problem remembering them in a different order when asked. Liars will also memorize small, specific details of an incident, while a truthful person may forget many details. Have the subject repeat their version of the events. You can say to them, "I'm a little confused. Could you tell me again what happened after you...?"

GUILTY

"I didn't do it, but I'll pay for the damage."
"What would happen to someone that did this?".

Unlawful Techniques

Do not use threats of physical violence, whether actual or implied. Do not threaten other members of the subject's family. Do not make promises to reduce any charges to induce a confession.

COGNITIVE INTERVIEWING

Preliminary Investigation

It is important that the officer conducting the preliminary investigation formulates a team attitude with the victim, an attitude of support and dedication to apprehend and convict the perpetrator of the crime.

Victim Stabilization

When obtaining initial information from the victim or witness of a violent crime, consider that the victim/witness has been through a tremendous ordeal. The officer should attempt to stabilize the person before obtaining information.

If the victims/witnesses are hysterical, take a moment to let them vent their emotions. Be empathetic to them, and be careful of the words you use.

If the victims/witnesses are experiencing anxiety, indicate that it is natural to have such feelings and have them take a few deep breaths to help them compose their emotions.

Tell witnesses that everything they say is very important and you want to understand all they say; therefore, it is essential that they speak slowly. Speaking slowly will cause the witnesses' breathing rate to slow, which decreases the pulse rate and helps to calm them.

Building Rapport

- Be aware of your body language and choice of words, especially when interviewing children.
- Watch the witnesses' body language and other forms of non-verbal communication.
- Select a location for the interview that will allow the person to be interviewed the ability to concentrate without distractions.
- Tell the victims that you are sorry this has happened to them. This act is almost magical in establishing rapport with victims.
- Thank persons interviewed for the information they gave, and advise them that the report will be submitted to a detective who will follow up with an investigation.
- If the report file number is available, give it to the victim.

Conducting the Interview

Dr. R. Edward Geiselman, Professor of Psychology, University of California at Los Angeles, conducted a study concerning police officer interviews. The following were identified as those used by successful police interviewers in the field.

- The most important factor in conducting an effective interview is not to interrupt the victims/witnesses while they are telling the story for the first time and take notes sparingly.

- When reviewing what the victims/witnesses say, it is sometimes helpful to repeat the victims' words or phrases verbatim. This helps to ensure accuracy and can result in jogging their memories for associated items and clues.

- Treat witnesses' statements as if theirs are the only ones you have. Any hunches you may have or information from other witnesses can be reviewed at the end of the interview.

- Use open-ended questions, such as: "Tell me about the suspect's appearance." If the witness is not specific enough, ask: "Tell me about his/her hair color...Tell me about his/her height/weight."

- Be very specific about suspect's description, such as head size and shape, description of eyes, nose, ears, etc. It may also be helpful to ask witnesses if the suspect reminded them of an actor, political figure, or other well-known person.

- Do not skip around. Follow up on information that triggers a question in your mind as soon as possible. Exhaust questioning in one area at a time.

- Near the end of the interview, review facts and details with the witnesses. Refer to your notes and make sure they are correct.

- Use your officer's notebook for note taking. Do not try to write the actual crime report while the witnesses are relating the story.

- Let the victims know you appreciate the information they have given you. Ask if they have any questions. Ask, "Who can I call for you? Do you need a ride home?" etc.

FOLLOW-UP INTERVIEWING

Cognitive Interview

R. Edward Geiselman and R. P. Fisher developed the Cognitive Interviewing Technique during the 1980s. The technique helps police witnesses recall information without the use of hypnotism.

The interview should be conducted in a comforting, safe environment. Before beginning the process, the investigator should build rapport with witnesses. To put witnesses at ease and gain their trust, spend some time talking about unrelated matters, such as work, family, hobbies, etc. Tell witnesses that the reason for the interview is to gain information to arrest the suspect and to prevent the suspect from hurting someone else. Emphasize that law enforcement needs the witnesses' help. Explain to witnesses that the Cognitive Interviewing Technique is a four-step interview process that will enhance memory. The technique is discussed below:

Reconstruct Circumstances

Ask witnesses to reconstruct scenes just before the crime, describing everything possible that happened before the crime. The more specific witnesses can be the better.

Ask witnesses to recount all observations using all the five senses, what was heard, smelled, etc. Sensory association enhances memory retrieval. This technique allows witnesses to be placed back into the locale and conditions of the crime so specific information may be recalled.

It is important to ask the witnesses how they were feeling at the time and their reactions to the incident.

Report Everything

Have witnesses report everything to you. Witnesses tend to give information that they think is important. All of us, when telling a story, edit and delete information that we think is not essential or relevant. When witnesses are instructed to tell their stories without editing and deleting essential information, they are less inclined to leave out points that may be important.

Recount the Events in a Different Sequence

Individuals are used to telling stories from the beginning to the end. If you ask witnesses to relate the sequence of events from the end to the beginning, they must concentrate more. As an example, people can spell their last names easily. However, if you ask them to spell the name backwards, they have to concentrate on each letter to accomplish the task. This technique causes different brain functions to work and makes witnesses concentrate on remembering.

Report the Events from a Different Perspective

Ask witnesses what they could have seen and heard if they had been somewhere else in the room, or could have witnessed the crime from someone else's eyes. "If you had been on the other side of the room, you could have seen that..." Oftentimes, witnesses can retrieve information that they could not recall originally if they visualize looking at the events from a different location.

This works especially well with witnesses and victims who have had firearms pointed at them during the incidents. They were so traumatized by the incidents; it is hard for them to recall all of the facts. If they are out from under the barrel of the gun, they may recall additional facts.

It is important to understand that not everyone visualizes (see pictures in their minds) when remembering. If the witnesses are non-visualizers, they may feel guilty that they cannot do what you ask.

Additional Techniques

In addition to the four general methods, the Cognitive Interview also uses a series of specific techniques to help an investigator elicit specific items of information from witnesses following the narrative phase of an interview. The investigator might suggest the following:

Physical Appearance: Did the suspect remind you of anyone? If you were reminded of someone, try to think of why. Was there anything unusual about the suspect's physical appearance or clothing?

Names: If you think that a name was spoken but you cannot remember what it was, try to think of the first letter of the name by going through the alphabet. Then try to think of the number of syllables.

Numbers: Was a number involved? Was it high or low? How many digits were in the number? Were there any letters in the sequence?

Speech Characteristics: Did the voice remind you of someone else's voice? If you were reminded of someone, try to think of why. Was there anything unusual about the voice?

Conversation: Think about your reactions to what was said and the reactions of others. Were there any unusual words or phrases used?

CLOSURE

At the end of the Cognitive Interview, you may want to compare information with other witnesses' information and clarify information that is different in other witnesses' statements.

Tell the witnesses: "You probably will remember additional details when you are more relaxed. When you do, please give me a call no matter how unimportant or trivial they may seem."

Help witnesses to validate that their feelings are normal and not uncommon. Inform them that if their feelings persist and give them difficulty each county in California has a Victim/Witness Program that deals with traumatic cases.

INTERVIEW TECHNIQUES USED SPECIFICALLY FOR CHILDREN

Interview Preparation Instructions

When interviewing a child using the cognitive approach, you should tell the child:

- "There may be some questions that you do not know the answers to. That's okay. Nobody can remember everything. If you do not know the answer to a question, then tell me that you do not know. Do not guess or make anything up. It is very important to tell me only what you really remember. Only what really happened."

- "If you do not want to answer some of the questions, you don't have to. That's okay. Tell me that you don't want to answer the question."

- "If you don't know what something I ask you means, tell me and ask me to use different words to describe it."

- "I may ask you some questions more than one time. Sometimes I may forget that I have already asked you that question. You don't have to change your answer, just tell me what you remember the best you can."

Reconstructing the Circumstances

Tell witnesses to think out loud when reconstructing the circumstances that occurred before the crime.

Report Everything Phase

Avoid leading child witnesses when they are going through the process of reporting everything. If you do not understand one of their statements, simply ask what they mean.

Telling the Story in a Different Sequence

Children have a poor sense of time spans and may have to be prompted regularly. If they are not prompted, they tend to make giant leaps of time when telling things in reverse order.

Misleading Witnesses

Eliminate phrases such as, "Imagine you were..." or "Pretend you saw..." when you are explaining the process of changing perspectives. Those phrases tend to mislead the witness and will present problems for you in court. Instead, it can be explained, "Now, view the events as you could see them if you were standing..."

If Children Cannot Recall Information

Change to easier topics if the child says, "I don't remember" to three questions in a row. Do not become overly persistent or verbally abusive in response to your frustration about the children's inability to remember certain facts. Instead, change topics and return for the missing facts later in the interview.

INTRODUCTION TO INTERROGATION

We will review the crime scenario and the arrest of the suspects.

The techniques discussed can be used by detectives in an intensive interrogation, but also in field interrogations in an abbreviated format. Be aware at all times of the legal ramifications of interrogations

Miranda Rights

Miranda warnings need only be given to suspects who are in custody and to those you plan to interrogate. For instance, you need not give Miranda warnings to a suspect that you are interrogating over the telephone.

Custody

Custody means a formal arrest. Detentions and traffic stops are not custody circumstances. Even if the "investigation has focused on the suspect," if not in custody and formally arrested, Miranda warnings are not necessary.

If a peace officer develops probable cause to make an arrest but never informs the suspect he is under arrest, the officer may interrogate without giving Miranda warnings. It depends on what is in the suspect's mind. If a reasonable person would not think he was in custody, Miranda warnings are not necessary.

Preparation

Prior to the interrogation, the interrogator should prepare by reviewing case files, background information on the suspect, prior arrest reports of the suspect, etc. An audio tape recorder should be tested and available since the suspect should be recorded during the interrogation.

INTERROGATION DRAMATIZATION

A detective interrogates one of the suspects from the crime scenario dramatized in Part One-Interview Techniques.

THE CONFRONTATION INTERROGATION TECHNIQUE

The Confrontation Interrogation Technique has proven successful in situations where the guilt of a suspect is fairly certain. It operates on the principle that the interrogator knows suspects are guilty, but the interrogator would like to know the reason the suspects committed the crimes. The interrogator will suggest a morally or socially acceptable reason the suspects committed the crimes.

Psychological Domination

After the Miranda warnings are given, suspects are left alone for a period of time. This heightens anxiety and stress. During this time, monitor the tape recording of the interrogation room, as suspect might audibly articulate their concern of being caught.

You may use props to assist you in psychologically dominating suspects. Props may include case files with the suspects' name prominently displayed and real or improvised items of evidence. When you re-enter the interrogation room, you may want to inspect the case file. This may create a psychological dominance and advantage and will heighten the suspects' anxiety level.

Confrontation Statement

The confrontation statement assures suspects that there is no doubt in your mind of their guilt. After you re-enter the interrogation room, address suspect by first name and make an actual or improvised fact synopsis, such as "Based on our extensive investigation, including many interviews and scientific analysis of evidence there is no doubt in our minds that you were the one who..."

The personality of the suspect will determine if you use emotion-packed or legalistic words at this point, such as rape, molest, rob, burglarize, etc. Moral or legal words conjure moral degradation or legal consequences. If you decide to use emotional words, only use them in the confrontation statement and not again until you get a confession.

After the confrontation statement, pause briefly to determine the suspects' response or lack of response. If there is no response to your statement, that may be an adoptive admission. An innocent person would vehemently deny the charge.

Handling Denials

- ❖ Expect the suspects to deny the crimes and remember that a stated alibi is a denial.
- ❖ Allow the suspects to deny the crimes or give an alibi only once. Repeated denials give the suspects a psychological boost and makes telling the truth later more difficult.
- ❖ Prevent repeated denials with verbal or non-verbal communication, such as, "That's not important right now, Bill," while holding your hand up in front of his face. Do not let suspects make a denial. Talk suspects down.
- ❖ Deceptive suspects may:
- ❖ Make evasive denials, such as "Why would you think that I would..."
- ❖ Make qualified denials, such as "On my mother's grave, I would never..."
- ❖ Use delaying tactics or phony surprise, such as "Who me?" or "What! I can't believe this is happening."

Transitional Phase

The transitional phase lessens the shock of the confrontation statement and provides a fluid medium to introduce the themes that you plan to use.

It avoids awkwardness but does not immediately soften the impact of the confrontation statement. The statement could be, "I've investigated many of these cases, and I know there's usually more than one side to the story. In fact, I recently handled a case very similar to this. A young fellow..." (go into your first theme).

Theme Development

A theme is a psychological, social, or moral excuse for the crime but not a legal one.

It is designed to make it easier for the suspect to confess and justifies the crime in suspects' minds or allows suspects to save face.

Always end the theme with a close-ended leading question, such as, "That's why you did it isn't it, Sam?"

Types of Themes

Sympathy: "Life's been hard on you. You have a family to support. Anyone in your circumstances would have done the same thing, and that's why you did it, isn't it, Sam?"

Pride: "I've never seen a slicker plan; you must have had a lot of guts to pull that off, didn't you, Bill?"

Blame Transference: "She probably wanted sex; why else would she dress that way; that's why you had sex with her, because she wanted it, huh, Bob?"

Less Reprehensible Motive: "You didn't intend to shoot that guy in the video store; you just wanted the money; he shouldn't have jumped at you like he did; that's why you shot him, isn't it, John?"

Minimize Crime: "A bank has plenty of money; it wasn't as if you took it from a poor family; and, that's why you took that money, isn't it, Bob?"

You should have developed themes before the interrogation, and the themes should fit the circumstances of the crime and the personalities of the suspects. You should have three or four themes prepared to use on the suspects. If you see that the suspects are not reacting to one theme, go on to the next theme. You can see when the suspects are accepting your themes. The suspects' facial expressions and body language will give you the clues.

Overcoming Objections

An objection does not deny the accusation but attempts to give an excuse why the accusation could not be true. When suspects start to object to, rather than deny the accusation, it is an indication that you have handled their denial phase correctly and you should be encouraged.

Forms of Objections and Ways to Overcome Them

OBJECTION	ANSWER
"I couldn't do that; I loved her."	"I believe you loved her, John; that's why I think this was a spur of the moment thing. That's why you did it, isn't it, John?"
"I wasn't brought up that way."	"I know that, Bill; I've checked your background; that's why I think you're a victim of circumstances here; it was Tom's idea, right, Bill?"

OBJECTION	ANSWER
"I don't have to force sex; I've got girls just asking for it."	"I don't doubt it; you're a good looking guy; that's why I believe she was all for it and teased you along; and then she panicked and shut you down; you couldn't help yourself, could you, Bill?"

Using Negative Alternative Questions

Negative alternative questions are those that present two choices: one that is socially or morally acceptable and one that is socially unacceptable. The affirmative answer to either is equally incriminating. The idea is to get the suspect to admit to the socially or morally acceptable choice. Emphasize and suggest the face-saver as the close-ended, leading question.

An example would be: "Did you plan to shoot the video store owner or did he force you to do it? He forced you into it, didn't he, Bill?"

Negative alternative questions make it easier for a suspect to confess and admissions or confessions should follow.

Expanding and Clarifying the Confession

Once the confession has been obtained, it is necessary to address intent, premeditation, and diminished capacity. Now, it is time to dispel with the face-savers and get all the facts. Use legal and realistic words rather than the soft words you used in developing your confrontation statement and themes.

Written Confession

A jury gives much weight to a written confession. The best-written confession is actually written by suspects, but if that is not possible, the detective may write it in quotes or paraphrase it. If the detective writes the confession, make two intentional errors per page so the suspect will be involved in initialing the corrections. This will counter the defense's saying that the suspect signed blank pages.

When reading the completed confessions with suspects, have the suspects correct the errors and initial them. Never ask suspects to sign confessions. Instead, state, "Place your name here, and date it."

USING CONFRONTATION INTERROGATION IN THE FIELD

Field officers may use elements of the Confrontation Interrogation Technique for field interrogations.

1) Create an atmosphere of confidence and guilt.

2) Developing themes.

3) Handling denials.

4) Posing negative alternative questions.

5) Handling suspects at the crime scene where the suspect may be susceptible to confession because of emotions.

The most important aspect of interrogating suspects in the field is not to argue with their alibis. This causes the suspects to lock themselves into their alibis and frustrates theme development and handling denials as listed above.

WITNESS INTERVIEWING FORMAT

1. Case #99-328-4
2. Interview of: John Wilson, FFI
3. Monte Vista Fire Station
   2249 Jamacha Road
   El Cajon, CA 92019
4. (619) 555-0364
5. 9-4-99
6. 1150 hours
7. I interviewed firefighter Wilson at the Monte Vista Fire Station. He related the following:
8. He said he observed Dan Beck give Captain Snow pills approximately five times last year (1993) and that it did not appear that anything was wrong or that they were trying to hide anything. He said the first complaints he heard from Beck were late last fire season. He said that Beck and Smith said they were having a problem with Captain Snow this fire season and they didn't want to be around him. He said he told Beck that if he didn't like Captain Snow's actions that he should tell someone to get it stopped.

   Fire fighter Wilson said he had never witnessed Captain Snow ingest any pills.
9. _____
   Jack M. Armstrong, Division Chief, #864
10. Attachment No. 12
11. 1 of 2

LEGEND

1. Case Number
2. Name of interviewee
3. Address of interviewee
4. Telephone of interviewee
5. Date interviewed
6. Time interviewed
7. Location of interview
8. Body of interview (synopsis, quotes, questions/answers)
9. Signature of interviewer (printed/typed name, badge #)
10. Attachment number
11. Page number (if more than one page, show as 2 of 5, etc.)

INTRODUCTION TO TAPED INTERVIEWS

- The following interview is being recorded with your permission. Is that correct?
- It is very important that you wait until I am completely finished with a question before you answer. This will allow you to hear the entire question before you answer it. In addition, we will not be speaking at the same time.
- Do you understand?
- When you do answer my questions, be sure to give a verbal response instead of shaking you head. Use the words yes or no instead of "uh huh" or "unh-unh" and do not use your hands to describe something as the recorder cannot distinguish or pick up these responses.
- Do you understand that?
- If a question seems confusing or you do not understand it please say so and I will clarify it for you.
- I may ask you a question that requires you to estimate such as time or distance. Please do not guess at the answer if you do not know. The difference between a guess and an estimate is if I asked you what time you got up today you may not know but you could estimate because you know when you had to be at work so you could estimate backwards and provide an answer. However, if I asked you what time I went to work today you would have to guess since you do not know when I get up or go to work.
- Do you understand this?
- Please state your full name and spell your last name.
- What is your address?
- What are your home and work telephone numbers?
- What is your date of birth?
- Are you giving this statement voluntarily?
- Have I made you any promises or reward for your statement?
- Is there any reason why you would not have good recall or memory today?
- Are you under the influence of any alcohol, narcotics, or medication?

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF _____

THE PEOPLE OF THE STATE OF CALIFORNIA
Vs.

No.
STIPULATION RE
POLYGRAPH EVIDENCE

Defendants |
_____ |

IT IS HEREBY STIPULATED by and between the parties hereto, to-wit, the People of the State of California, plaintiff, by their attorneys, _____, DISTRICT ATTORNEY, and _____, DEPUTY DISTRICT ATTORNEY, _____ County, State of California, and _____ defendant herein, personally, and by attorney, _____ as follows:

That said defendant shall submit to a polygraph test for the purposes of determining his guilt or innocence of the charges on file in the above-captioned case.

That said polygraph test shall be administered by _____, it is being stipulated by and between the parties hereto that said _____ is competent and qualified to administer said test and to interpret the results of same and to render his opinion

That said polygraph test shall be administered on or before _____ prior to the trial of the above-captioned matter, or in the event that such case shall be continued for any reason whatsoever, then said polygraph test shall be administered on or before the date immediately prior to the date of continuance.

That, in determining guilt or innocence of the defendant herein of the charge of violation of _____ as alleged in the complaint on file in the captioned case, the material issues to be determined by said polygraph test shall be if the defendant.

That the specific methods, techniques, and types of polygraph testing to be used, together with the questions to be asked, the conditions under which said questions shall be asked, and the form of such questions, shall be determined by said _____ in his absolute discretion.

That said _____ may, prior to such polygraph test, have access to any and all reports, records, transcripts, and statements made or taken during the investigation of the charges upon which the said test is based, and may read and examine same and base any questions he deems proper upon same.

That if, following said polygraph test and based thereon, said _____ has an opinion with reasonable professional certainty as a polygraph technician or operator as to the truth of falsity, affirmation or negation, credibility or non-credibility of defendant's answers or responses to questions or issues set forth in paragraph (D), and/or of the truth or falsity, affirmation or negation, credibility or non-credibility of said defendant's answers or responses to any relevant or material question in

connection therewith, or as to the said defendant's answers or responses to any material or relevant questions connected with the captioned case.

IT IS FURTHER STIPULATED that such opinions of said _____ shall be admissible in evidence in the trial of the captioned proceeding, together with the reasons therefor, and that said _____ may be called as a witness and sworn on behalf of either party to such proceedings, and any and all objection to the competency, weight, remoteness, or admissibility based on public, legal, judicial, or social policy, or of due process of law, are hereby EXPRESSLY WAIVED by all the parties hereto and by their respective counsel.

PROVIDED, HOWEVER, that nothing herein contained shall constitute a waiver of any right of cross-examination as to such opinions or of the reasons therefor, or of any right of impeachment, by either party thereto, and

PROVIDED FURTHER, that if said _____ should certify it to be his opinion that the results of said polygraph test or tests are inconclusive on all material or relevant issues in the case, such opinions and/or the reasons therefor, and/or the fact or a test having been requested and/or administered, shall NOT be admissible in evidence in the trial of the captioned case and no allusion, directly or indirectly, to such test shall be made by or on behalf of either party hereto during such trial.

That said defendant shall cooperate fully in the administration of such polygraph test and shall abstain from use of or taking any drugs, narcotics or medications, either internally or externally, except as expressively permitted by said _____ for forty-eight (48) hours immediately preceding said polygraph test.

That all findings and results of said polygraph test are hereby released to both parties hereto immediately upon their availability, and said _____ is hereby expressly authorized to communication same forthwith, orally or in writing, to both partied hereto, in accordance herewith.

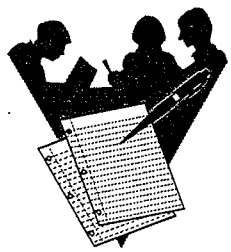
IN WITNESS WHEREOF, the parties to the caption proceeding hereby affix their signatures and further stipulate that these stipulations shall become final, irrevocable, and binding upon the filling of the duly and fully signed original hereof.

_____
District Attorney

DATED: _____
Deputy District Attorney

DATED: _____
Attorney for Defendant

ACTIVITY SHEET 5-2-1



PERSONAL SPACE AND STRESS

TIME FRAME: 0:15

MATERIALS NEEDED:

- None

INTRODUCTION:

This activity provides you with the opportunity to feel the discomfort an interviewer can cause when moving into the subject's "space." This discomfort can then be used to the interviewer's advantage.

DIRECTIONS:

1) Pair up with another student and stand back-to-back.

2) Upon the instructor's command, turn around, feet almost touching, and look each other in the eye. Try to remain solemn and ***do not*** speak to each other.

3) Once either of you laughs or steps away, you are finished and should return to your seat.

4) Be prepared to briefly discuss the feelings you experienced.

ACTIVITY SHEET 5-2-2

CONDUCTING AN INTERVIEW

TIME FRAME: 0:30

MATERIALS NEEDED:

- Writing paper
- Pencil or pen

INTRODUCTION:

This activity provides you with the opportunity to conduct an interview and determine specific activities and observations of your subject.

DIRECTIONS:

1) Pair up with a student you did not share a ride to or from class. One of you is the "suspect" and the other is the "interviewer."

2) The "interviewer" will question the "suspect" about his or her activities and observations between the time the suspect left home or work and arrived at class yesterday (or the last time the class met). You could also use the timeframe between the time the last class was dismissed and the suspect arrived home or at work.

3) The interviewer will write down relevant information acquired during the interview.

4) The interviewer will give a brief verbal summary of his or her written report to the class.

UNIT 5: INTERVIEWING

INTRODUCTION TO JUVENILE LAW

Juveniles typically are treated different than adults are treated. The philosophy is to promote and protect the child while protecting the public. In a court proceeding involving a juvenile, there is never a criminal conviction, but the charges against the juvenile may be found to be true.

There are several ways for juveniles to become wards of the court. The first way is one that the juvenile has no control over. Juveniles may become wards if there is no parental care or control, no suitable home, victim of neglect or abuse, or being dangerous through mental or physical abnormalities. These juveniles are covered under W&I Code §300. Juveniles may also become a ward of the court by being habitually disobedient or truant, refusing to obey reasonable orders of parent or guardians, or being a minor because of age alone, violating a city or county curfew law. These juveniles are covered under W&I Code §601. The third way juveniles become wards is through criminal activity if they violate a law of the United States, California, city, or county (other than a curfew ordinance). These juveniles are covered under W&I Code §602.

The prosecution bears the burden of proving that juveniles under the age of 14 knew it was wrong to commit a crime. Juveniles between the ages of 14 to 17 are considered responsible for their actions. The prosecution may petition the juvenile court to find juveniles over the age of 16 to be unfit for treatment under juvenile law and tried as an adult. The juvenile court judge must make the decision.

Juveniles as young as 8-years-old can be expected to understand the wrongfulness of an act. When a young juvenile causes a fire, the investigator must determine their intent. Most acts by young juveniles are because of curiosity and that is not a criminal offense.

When taking a juvenile into custody, the juvenile must be advised of their Miranda rights, whether or not the officer intends on questioning. The warning does not need to be done immediately upon custody, but should be given at some time before booking into juvenile hall. This applies to California only and is found in W&I Code §625. Once a juvenile is arrested, they must be released within 48 hours unless a petition is filed. If a juvenile is held in custody for 6 hours or more, a written explanation must be filed within 72 hours. Any detention over 24 hours requires a probation supervisor's review.

Juveniles cannot be detained in facilities with adult offenders such as jails or police lock-ups unless they have been arrested for driving under the influence (DUI). They may be taken to a jail facility for a chemical test, but cannot be locked in a cell or room. They must be continuously supervised by a peace officer or facility employee. A juvenile cannot be held longer than two hours under these circumstances and must not have any contact with adult offenders.

When questioning a juvenile believed to be responsible for a criminal offense, they must be advised of their Miranda rights, the same as an adult. The only difference is ***when*** the juvenile invokes their right to counsel. Besides asking for an attorney, a juvenile should be considered invoking their right to counsel if they ask to see their parents, guardians, other relatives, or employer. There is no requirement on the officer to advise the juvenile that they have a right to speak to their parents before interviewing. Under federal law, a juvenile requesting to see a probation officer is not an invocation of rights.

When a juvenile is placed into confinement, they are allowed to call a parent, guardian, other relative, employer, and/or an attorney if requested (W&I Code §627). An officer is not required to advise the juvenile of this right (Michael J. 110 CA3d 835 [1980]). All arrested persons have the right to make three telephone calls (PC 851.5). It is a misdemeanor to willfully deprive a juvenile the right to make these calls. When the need arises to interview a juvenile at an educational facility, a peace officer has the right to do so without interference from the school administrators. However, it is wise to contact the educational administrator before contacting the student. Although it is not required, an administrator may wish to be present during the interview.

Penal Code §11166 requires fire fighters to report suspicion of child abuse to the local child protective services immediately or as soon as practical. A written report must be filed within 36 hours. The suspected child abuse may pertain to mental as well as physical abuse. A sample child abuse report form is at the end of this chapter.

UNIQUE LAW VIOLATIONS PERTAINING TO JUVENILES

Possession of Destructive Devices or Explosives in or Near Certain Places; Felony; Punishment (Pen. Code, § 12303.2)

"Every person who recklessly or maliciously has in his possession any destructive device or any explosive on a public street or highway, in or near any theater, hall, school, college, church, hotel, other public buildings or private habitation, in, on, or near any aircraft, railway passenger train, car, cable road or cable car, vessel engaged in carrying passengers for hire, or other public place ordinarily passed by human beings is guilty of a felony, and shall be punishable by imprisonment in the state prison for a period of two, four, or six years." See also Penal Code §12355 Booby-traps.

Notification of Parent, Guardian or Relative of Release of Pupil to Peace Officer; Suspected Child Abuse Victims (Education Code §48906)

When a school official releases a minor to you to be removed from the school premises, the school official has a duty to immediately let the parent or other responsible relative know about the release and where the minor is being taken, except in cases of suspected child abuse. In suspected child abuse cases, the school official must give you the address and telephone number of the minor's parent or responsible relative. You then have the duty to immediately notify that person that the minor is in custody, and

where. If, however, you reasonably believe that disclosure of the minor's location would endanger the minor, you can withhold telling the relative about the location for up to 24 hours. Besides telling the parent or relative about the fact of custody, you must also tell him or her whether the child requires and is receiving medical or other treatment. The juvenile court will subsequently review your decision to withhold information on the location of the minor.

Dirks, Daggers, Knives, Razors, Tasers, or Stun Guns; Bringing Into or Possession of upon or Within Public Schools and Grounds; Exceptions (Penal Code §626.10)

This section generally prohibits persons from possessing or bringing certain weapons and dangerous objects onto school, college, or university grounds, or from possessing them there. The prohibited objects are "any dirk, dagger, knife having a blade longer than 3-1/2 inches, folding knife with a blade that locks into place, a razor with an unguarded blade, a taser, or a stun gun, as defined in subdivision (a) of section 244.5..."

Exceptions exist when these objects are brought or possessed by someone "for a lawful purpose within the scope of his employment," for "use in food preparation or consumption," or by a peace officer, federal officer, military personnel, etc., who are carrying on their official duties.

Temporary Seizure of Firearms at Scene of Family Violence (Penal Code §12028.5)

Any working peace officer at the scene of a family violence incident involving a threat to human life or a physical assault may take temporary custody, for at least 48 hours, of any firearm in plain sight or discovered pursuant to a consensual search, as necessary for the protection of the peace officer or other persons present, but must give the owner or possessor a receipt which spells out certain information.

Blackjacks, Etc., as Nuisances; Confiscation and Destruction; Preparation as Evidence (Penal Code §12029)

"Except as provided in section 12020, blackjacks, slingshots, billies, nunchakus, sandclubs, sandbags, shurikens, metal knuckles, short-barreled shotguns or short barreled rifles as defined in section 12020, and any other item which is listed in subdivision (a) of section 12028 are nuisances. These weapons shall be subject to confiscation and summary destruction whenever found within the state.

SUSPECTED CHILD ABUSE REPORT

To Be Completed by Reporting Party
Pursuant to Penal Code Section 11166

A. CASE IDENTIFICATION

TO BE COMPLETED BY INVESTIGATING CPA

VICTIM NAME:

REPORT NO./CASE NAME:

DATE OF REPORT:

B. REPORTING PARTY

NAME/TITLE		
ADDRESS		
PHONE ( )	DATE OF REPORT	SIGNATURE

C. REPORT SENT TO

☐ POLICE DEPARTMENT ☐ SHERIFF'S OFFICE ☐ COUNTY WELFARE ☐ COUNTY PROBATION

AGENCY	ADDRESS	
OFFICIAL CONTACTED	PHONE ( )	DATE/TIME

D. INVOLVED PARTIES

VICTIM

NAME (LAST, FIRST, MIDDLE)	ADDRESS	BIRTH DATE	SEX	RACE
PRESENT LOCATION OF CHILD		PHONE ( )		

SIBLINGS

NAME	BIRTH DATE	SEX	RACE	NAME	BIRTH DATE	SEX	RACE
1.				4.			
2.				5.			
3.				6.			

PARENTS

NAME (LAST, FIRST, MIDDLE)	BIRTH DATE	SEX	RACE	NAME (LAST, FIRST, MIDDLE)	BIRTH DATE	SEX	RACE
ADDRESS				ADDRESS			
HOME PHONE ( )	BUSINESS PHONE ( )			HOME PHONE ( )	BUSINESS PHONE ( )		

E. INCIDENT INFORMATION

IF NECESSARY, ATTACH EXTRA SHEET OR OTHER FORM AND CHECK THIS BOX ☐

1. DATE/TIME OF INCIDENT — PLACE OF INCIDENT *(CHECK ONE)* ☐ OCCURRED ☐ OBSERVED

IF CHILD WAS IN OUT-OF-HOME CARE AT TIME OF INCIDENT, CHECK TYPE OF CARE:
☐ FAMILY DAY CARE ☐ CHILD CARE CENTER ☐ FOSTER FAMILY HOME ☐ SMALL FAMILY HOME ☐ GROUP HOME OR INSTITUTION

2. TYPE OF ABUSE *(CHECK ONE OR MORE)*
☐ PHYSICAL ☐ MENTAL ☐ SEXUAL ASSAULT ☐ NEGLECT ☐ OTHER

3. NARRATIVE DESCRIPTION:

4. SUMMARIZE WHAT THE ABUSED CHILD OR PERSON ACCOMPANYING THE CHILD SAID HAPPENED:

5. EXPLAIN KNOWN HISTORY OF SIMILAR INCIDENT(S0 FOR THIS CHILD:

INSTRUCTIONS AND DISTRIBUTION ON REVERSE

DO NOT submit a copy of this form to the Department of Justice (DOJ). A CPA is required under Penal Code Section 11169 to submit to DOJ a Child Abuse Investigation Report Form SS-8583 if (1) an active investigation has been conducted and (2) the incident is **not** unfounded.

Police or Sheriff-WHITE Copy; County Welfare or Probation-BLUE Copy; District Attorney-GREEN Copy; Reporting Party- YELLOW Copy

INSTRUCTIONS

(Section A to be completed by investigating child protective agency.)

SECTION A – "CASE IDENTIFICATION"

Enter the victim's name, report number or case name, and date of report.

(Sections B through E are to be completed by reporting part.)

SECTION B – "REPORTING PARTY"

Enter your name/title, address, telephone number, date of report, and signature.

SECTION C – "REPORT SENT TO"

(1) Check the appropriate box to indicate which child protective agency (CPA) this report is being sent.

(2) Enter the name and address of the CPA to which this report is being sent.

(3) Enter the name of the official contacted at the CPA, the telephone number, and the date/time contacted.

SECTION D – "INVOLVED PARTIES"

a. VICTIM (S): Enter the name, address, physical data, present location, and telephone number where the victim is located (attach additional sheets if multiple victims).

b. SIBLINGS: Enter the name and physical data of each sibling living in the same household as the victim.

c. PARENT: Enter the names, physical data, addresses, and telephone numbers of the father/stepfather and mother/stepmother.

SECTION E – "INCIDENT INFORMATION"

(1) Enter the date, time, and place the incident occurred or was observed; check the appropriate boxes.

(2) Check the type of abuse.

(3) Describe the injury or sexual assault (where appropriate, attach Medical Report – Suspected Child Abuse Form DOJ 900 or any other form desired).

(4) Summarize what the victim or person accompanying the victim said happened.

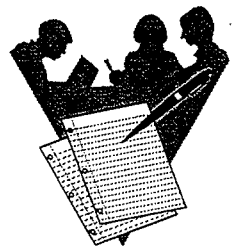
(5) Explain any known prior incidents involving this victim.

DISTRIBUTION

Reporting Party: Complete Suspected Child Abuse Report Form SS 8572. Retain yellow copy for your records and submit top three copies to a child protective agency.

Investigating Child Protective Agency: Upon receipt of Form SS 8572, ***within 36 hours*** send white copy to police or sheriff, blue copy to county welfare or probation, and green copy to district attorney.

ACTIVITY SHEET 5-3-1



GLADYS R. QUESTIONNAIRE

TIME FRAME: 0:30

MATERIALS NEEDED:

- Gladys R. questionnaire
- Pen or pencil

INTRODUCTION:

This activity provides you with the opportunity to use the Gladys R. questionnaire to determine if a juvenile knows the difference between right and wrong.

DIRECTIONS:

1) Pair up with another student.

2) Select one of you to be the "interviewer."

3) Interview the suspect using the Gladys R. questionnaire on the following two pages.

4) Be prepared to briefly discuss the results of your interview with the class.

GLADYS R. QUESTIONNAIRE

To be used for all arrestees under 14 years of age. To be given after Miranda rights have been waived. If subject refuses to waive his rights, parent's answer below is adequate.

From Minor

1. Do you know the difference between doing what's right and what's wrong?

2. Give me an example of something that is right to do.

3. Give me an example of something that is wrong to do.

4. Do you go to school?

5. What have they taught you in school about it being wrong to

6. What has your mother or father taught you about it being wrong to

7. Does your mother or father punish you for doing something they have told you is wrong?

From Minor's Parents

1. Have you taught your child the difference between right and wrong?

   _____

   _____

2. Have you taught him/her that it is wrong to

   _____

   _____

3. Do you send your child to school?

   _____

   _____

4. Can he/she read and write?

   _____

   _____

5. Do you think your child knows it is wrong to

   _____

   _____

Note: Extra care should be taken in advising your subjects of Miranda rights. Determine that he or she knows the meaning of lawyer, judge, court, silent, appointed, etc. Indicate these explanations in their waiver.

UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION & MECHANISM OF INJURIES

There are a number of different individuals, as well as professional disciplines, that are involved with investigating fire fatalities and scenes where serious fire injuries have occurred. It is important that the fire investigator understand the roles of the other professionals. The overall investigation must be coordinated so that it results in an effective operation.

ALL FIRE DEATH INVESTIGATIONS SHOULD BE CONDUCTED AS A HOMICIDE INVESTIGATION

Even if the scene "looks" like an accident, the scene investigation ***must*** be handled as a homicide. If the investigator does not approach the fire death investigation in the "right frame of mind," he or she will overlook evidence and ***not*** conduct a thorough examination of the scene.

If a serious injury has occurred, the same procedures and precautions that are used at a fire scene fatality should also be followed. Often the scene of a fire where a serious injury has occurred is not treated with the same priority. An injury scene and the evidence located there needs to be treated exactly as a fatality scene. This includes photography, sketching, crime scene assistance, and recovery of the victim's clothing. A fatality that results from injury at a fire scene is considered a fire fatality if death occurs within 365 days of the incident.

There are philosophical problems in law enforcement and the fire service when dealing with this type of investigation. Law enforcement must realize that fire may be just another weapon in the hands of a killer. The fire service must realize that "it is not just a fire" but a criminal investigation. This is true of ***all*** fire investigations.

A fire incident involving the death or serious injury of a fire fighter may require the fire investigator to participate in a departmental investigation in addition to origin and cause determination. The International Association of Fire Chiefs and the International Association of Fire Fighters have published a guide and investigation manual to assist with the planning and implementation of the investigation.

Since it is a fire scene, many investigators feel that all the evidence has been destroyed. This is not true, as some types of evidence remain after a fire but may have changed in shape or form or may be buried in the debris. For this reason it is imperative that the scene be examined down to floor level. The fire scene and fire death investigator must be able to recognize evidence—even evidence that has gone through a fire.

LOGISTICAL CONSIDERATIONS

Time Commitments

The fire death investigation is one of the most time consuming and demanding types of investigations. A complete fire death investigation will take time. The lack of time is not a "criteria" for not conducting a complete and professional investigation. The excuse of "I didn't have the time" would sound weak on the witness stand. There could also be civil liability for not conducting a professional and thorough investigation.

Scene Security

Scene security is another time consuming task that must be dealt with properly. The scene must be maintained by the agency that has jurisdiction in the case. Time constraints regarding case law places a burden on the investigation. They ***must*** get permission to remain on the property from the owner or the occupant or obtain a search warrant. The search warrant is the best method.

UNIQUE PROBLEMS FACED IN A FIRE DEATH INVESTIGATION

Condition of the Evidence

During a fire, many types of evidence that would be found in a normal homicide may have been destroyed or changed drastically in form and/or value.

Trace/comparison evidence such as fibers, hair, blood, fingernail scrapings, latent prints, seminal stains, tool marks, question documents, etc., ***may*** no longer be available. What may be left depends on the type and intensity of the fire, the amount of destruction and the amount of work investigators are willing to put into the investigation. True evidence may be present if it is carefully looked for.

Overhaul of the scene should be conducted only by the investigation team while conducting the scene examination.

Even though the evidence may have changed does not mean that it no longer has value in the case. The investigator must be familiar with fire and how it works. This will enable the investigator to recognize evidence that has been through a fire. An additional problem may be contamination of the evidence by the fire and/or fire suppression activities.

THE FIRE DEATH INVESTIGATION

A homicide investigator called to a death scene may see some obvious signs that are immediately apparent to assist with the conclusion. At a fire scene, the crime may not be apparent until the origin and

cause determination has been made about the incendiary origin of the fire. The fire may have been the "weapon" that caused the death or serious injury. Alternatively, perhaps the fire was used as a method to conceal the original crime of homicide.

As stated above, one of the great differences between a fire death investigation and a standard homicide investigation is the *scene integrity*. In this case, the crime scene has been burned and thoroughly watered down---in most cases possibly with thousands of gallons of water. The only redeeming factor is that most of the "good" evidence will be at floor level and may have been protected by the debris on top.

In a fire death investigation, the investigator must be able to conduct a ***hands-on*** examination of the body or bodies ***at the*** scene, before the body or bodies are ever moved. The body or bodies are fuel load and will have burn patterns on them. A burned body is fragile. Evidence may be destroyed during transportation so it is best to conduct a detailed, external examination prior to the body being moved. Team effort is the key in this type of investigation. It may cause a number of different agencies to "work together" as a unit toward the same goal.

The primary investigator is normally the individual that is mandated to prepare or has the jurisdictional responsibility for preparing the final report. This may be a fire investigator or law enforcement officer. Being mindful of the team concept and that the medical examiner or their representative is ultimately responsible for processing the body, the primary investigator is responsible for the initial delegation of activities at the scene. Usually the fire investigator assumes the lead in the investigation. The fire investigator is the most appropriately trained individual to process the fire scene, process fire scene evidence, and document the evidence. The fire scene must be treated as a crime scene even if the commission of a crime has not yet been determined so that evidence is properly recognized, preserved, collected, and documented.

Evidence may still be on the scene; only its form or characteristics may have been changed by the fire process. Evidence may have been contaminated or damaged during fire suppression. The fire investigator is trained to recognize those changes. For example, the investigator can critically examine tool marks and condition of glass. Some evidence may be covered by fire debris and can only be recovered by systematic removal and examination by a trained investigator.

The Investigation Personnel

Fire Investigator

The fire investigator should be an "expert" in fire origin and cause. The investigator must know how to interpret the fire indicators on the body(s) and surrounding area, as well as be familiar with homicide investigation and the collection of evidence. The investigator should know how to use various methods of scene processing and the examination and reconstruction of a crime scene.

Homicide Investigator

The homicide investigator should be able to work alongside the fire investigator as the body is examined. Once it has been determined that a homicide has occurred and the fire scene has been processed, the homicide investigator may assume the lead in the investigation.

Forensic/Evidence Investigator

The forensic/evidence investigator should be the third member of the team that conducts the examination of the body or bodies at the scene.

Deputy District Attorney

The Deputy District Attorney (DA) that is involved in a fire death prosecution should be familiar with fire investigation and terminology. The DA should be available for assisting in obtaining a search warrant and for legal advice during the investigation.

Forensic Pathologist (very important)

The forensic pathologist is responsible for establishing the cause and mode of death. It is very important the pathologist view the body in place. Burned bodies are fragile and tend to come apart during transportation to the morgue. It would be best if the pathologist could come to the scene and work with the "team" processing the body(s). The pathologist ***will not*** have a clear understanding of what he is looking at unless he sees the body(s) at the scene.

If the pathologist cannot come to the scene, take a number of photos of the body and its position in relation to the debris, evidence, and surrounding structure. Send the photos along with the body(s) to the pathologist.

Radiologist

If the surface of the deceased is damaged by smoke, heat and/or fire, it will be necessary for a radiologist to make full body x-rays prior to the post-mortem examination. This will assist the pathologist in the recovery of evidence during the post-mortem examination.

Toxicologist

The toxicologist is responsible for examining the deceased's body fluids or contributing factors of death.

Forensic Odontologist

Depending on the condition of the body, an examination of the teeth conducted by a forensic odontologist may be used to help burned victims.

Forensic Anthropologist

A forensic anthropologist may be used to identify badly burned and damaged remains.

Coroner/Medical Examiner

The coroner (or medical examiner in some counties) is responsible for taking possession of the deceased and property of deceased when the scene investigation is completed. The coroner is also responsible for making notification of next of kin and conducting investigations (along with the pathologist) into the cause of death.

Then medical examiner performs these functions in some counties. The medical examiner, fire investigator, and homicide investigator should process the body and area around the body as a coordinated team. Only when all are satisfied should the body be released from the scene and moved.

"Outside" Investigators

Interviewing of witnesses should be conducted by outside investigators simultaneously with the scene investigation. The outside investigators need to communicate with the inside investigators during the investigation, and vice versa.

Additional Fire Investigators

Additional fire investigators are the backbone of the investigation. After the body(s) is removed, a detailed fire scene investigation will start. It will depend on the size of the scene as to how many additional investigators will be needed. This investigation will be conducted to identify and collect evidence and to determine the origin and cause of the fire.

Importance of Team Work

All of the personnel should be able to work together, as a team, inside and outside of the scene. Each of the above personnel has an area of expertise that the other usually does not have. It is vital to the investigation that they work together and complement one another.

PLANNING OUT THE INVESTIGATION

Before starting the scene examination and processing the body(s), the investigator should:

1) Have all the principles of the investigation team there and assign responsibilities to the different members.

2) Assign "seasoned" team leaders to the origin and cause teams. Team leaders should be familiar with the different methods of scene examination and reconstruction.

3) Set up a command post outside of and somewhat away from the structure.

Time and Personnel

Time and personnel are two of the greatest problems that will be faced. As an example, if the fire occurred in a three-bedroom two-bath home, if the structure was well burned throughout, and if there were two bodies, the investigator would need the following:

1) At least two teams of three (3) persons for the "general" processing of the fire scene.

2) At least two teams of two (2) persons for the "sifting" teams.

3) At least two investigators conducting interviews "outside" of the scene

4) Fire investigator, homicide investigator, and forensic person (criminalist) to process the bodies.

5) Individuals for photography, video, and diagramming the scene.

6) Evidence technician who can catalogue and control the evidence.

7) An investigator that is an expert in electrical investigations.

8) The investigation supervisor and a public information officer at the command post.

9) Personnel to guard the scene each night until the investigation is complete.

10) There should be one guard on duty during the day to keep a running log of who comes and goes at the scene. Follow appropriate crime scene protocol.

11) The total personnel may be 10 to 15 investigators. This may seem like a lot of personnel, BUT it is a trade off. Less personnel, means more time to do the job. The above scenario would take 3 to 5 days to complete the scene investigation.

Equipment

All of the "normal" evidence collection equipment for a major crime scene should include, but not be limited to:

1) Sets of sifting screens, starting at one (1) inch mesh down to 1/4" - 1/8" mesh or window type screen.

2) Video recorder.

3) Depending on the structure and damage, it may be necessary to have heavy equipment on the scene to move debris.

4) One fire truck (pumper) for water regarding sifting and wash down during the scene investigation.

5) Lighting equipment for the interior of the structure.

6) If possible, have electrical power brought into the structure from neighbors or the power company.

7) Phone hookup at the command post.

8) Food and drink for the investigators.

9) Large tarp or ground cover for placement of the evidence that can be used for cover during inclement weather.

10) An area set aside, outside of the structure, which can be used to sort and store the evidence during the investigation.

THE SCENE INVESTIGATION

Profile the Scene (Let the Scene Talk to the Investigator)

Obtain as much background information as possible regarding the victim(s). This information may help you understand what you see and discover during the investigation.

- ❖ During the scene investigation, the investigator should look for things that are there, which should not be, and look for things that should be there and are not.

- What position is the body in? Is the body in a position that matches up with what the background information revealed? Was the person physically capable of being in the position found?

- As the investigation continues and more information is gained, the investigator will want to know:

  - ***How was the fire set up?*** This may tell the investigator information on the suspect's motives, knowledge of fire dynamics, or knowledge of the structure.

  - ***Who was the victim?*** This may tell the investigator who the suspect is, motive of the suspect, opportunity of the suspect regarding victim's lifestyle.

  - ***What was the type of structure?*** This may tell the investigator what type and/or motive of suspect.

  - ***What was the time and date of the fire?*** This may tell the investigator the opportunity of the suspect to act and the suspect's knowledge of the victim and the victim's lifestyle.

THE BODY(S) AND SURROUNDING AREA

Examination and search of the body(s) and surrounding area is usually the first item of business at a fire death investigation. The deceased ***must be*** carefully examined ***before*** removal from the scene. The burned body is fragile and may be physically altered during removal to the morgue. The medical examiner or their representative (investigator) must be involved in this process. This is their area of expertise.

The fire investigator and "other" team members should first plan out how they want to handle the processing and who will do what.

- Measurements, diagrams, and photographs should be taken before the area is touched.

  - "Place" the body(s) position in relation to the structure by measurements and photography.

- Set up the video equipment and view the overall area of the body.

  - Let the video run during the entire examination and processing of the body.

  - ***Do not*** use a generator for power; this will create too much noise.

  - Wear ***dark clothing*** and use black body bags. Light clothing and light body bags will cause the automatic aperture of the video camera to "stop down," thereby causing a dark picture.

- ➢ It is the investigator's personal preference whether to keep the sound on during the investigation. However, it is recommended that no sound be used. If the sound is on, be cautious about what is said. Talk only when necessary and pertinent to the investigation. Advise the other investigators on scene to keep the noise down and to use appropriate language.

- ❖ The body(s) and surrounding area (about three feet out from the body(s)) can now be "hand searched" by the investigation team.

- ❖ Use some method of geographically locating and identifying evidence, as it is located on or around the body. The hand search should be conducted as an archeological dig. The debris should be layered by hand. The amount of destruction to the body and surrounding area will dictate how you will proceed. The investigators should talk to one another, advising each other what they are finding.

- ❖ Note the following:

  - ➢ Remember to let the results of the investigation talk to the investigator.

  - ➢ If parts of the body are missing, the following question must be asked and answered:

    - Did the fire cause it or were they removed before the fire?

    - Are the findings consistent with who the victim is?

    - Is the damage observed on the body and the surrounding area consistent with the fire?

    - Are the findings consistent with what is known about the structure, the victim, and the place the body is located.

- ❖ Look for flammable liquids, containers, and caps to containers in the area of the body.

- ❖ Look for evidence that an extra fuel load was placed on the victim before the fire. All that may remain could be in the form of metal hardware or any other foreign objects on the body.

- ❖ Look for jewelry on or near the body. It could belong to the victim or suspect and might be used for identification.

- ❖ Read the fire patterns on the body. The body is also "fuel load" and will have burn patterns on it.

As items of evidence are found, measurements and photographs should identify them including the time, date, and location or grid number where the debris was located. The bags should be placed in a designated location while waiting for the sifting teams to process them.

Observation of Fire Damage and/or Injuries to the Victim

Bone Fractures

The bones of the deceased may have been fractured during a severe fire. The fracture could be the result of fire penetration as well as muscle spasm/contracture during the fire. The fracture usually occurs to the long bones of the legs and arms. The remaining bone may show high heat damage and would typically be white. The hands and feet are typically destroyed during a fire due to the thin tissue around the small bones. There is usually no bleeding associated with these wounds, as they are post-mortem.

The investigator may need the expertise of a forensic anthropologist to determine if the fracture was caused by the fire or occurred before the fire.

Shrinkage of Bone

The bone may shrink when heated. This may lead to incorrect estimates of stature.

Tightening Of the Skin Due To Heat

This can lead to an under-estimation of age due to the lack of wrinkles. A variant of this is swelling that can take place in a person who lives for a while after the injury.

Damage to the Skull

It is not unusual for the skull of a well-burned body to crack open along the suture lines during a fire. The skull may be white from exposure to fire. There is usually no blood present since this process occurs after death. The brain matter may extrude from the openings. The investigator should find out if the damage matches up to the fire patterns and/or the position of the body. Skull fragments may break into small pieces.

Small Children May Be Badly Damaged or Almost Destroyed by the Fire

Depending on the age of the child, the bones may still not be totally calcified and subject to total destruction by fire. The skull may be thin and the suture lines may not have calcified. The fire may penetrate the skull early on and there may be a reddish substance at and around the child's head called coagulum. Drying out of the blood supply from the cranial cavity causes this.

Reduction of Body Weight

Reduction of body weight can result from actual destruction of body parts by fire and the loss of fluid. During the fire, the body fat will melt down and become additional fuel load. Depending on the fat content of the body it is possible that the melted fat may even cause burn patterns to occur, much as with any flammable fluid. The adult body may be reduced to half its living weight.

Skin Blistering

In the absence of flame, hot air and/or steam can cause blistering of the skin (2^{nd} degree burns). Blistering can also be caused by carbon monoxide poisoning, exposure to chemicals, decomposition of the body, and prolonged immersion in water.

Discoloration of Internal Tissue

Heat will cook those portions of the tissues immediately beneath the outside layer. The tissue will tend to turn gray or a pale color.

Blood

Pay very close attention to any blood you find at or near a burned body. As a rule of thumb, burned bodies do not bleed. The fat content will melt out during the fire but very little blood will be evident. Accidental fire victims may show a limited amount of bleeding around the nose and ears. Some bloody purge may be present at drainage sites. If there are more than a *few drops* around the deceased, it is probably from wounds before the fire. Blood spatters or patterns must be examined and documented.

Pay particular attention to this indicator. If a large amount of blood is located any place next to, on or under the body, it should make the investigator very suspicious. If the investigator finds blood, it is probable the victim sustained an injury prior to death and possibly prior to the fire.

Missing Body Parts

In a well-burned body, the destruction by fire could cause bone and some exposed body parts to burn away. The investigator must try to determine if this happened prior to the fire or because of the fire. The investigator must be careful to recover any pieces of bone or body that are located during the body examination and subsequent scene investigation. All recovered parts of the body must be transported to the morgue and analyzed by the pathologist.

Teeth

Pay close attention to teeth you find in the debris. The number of teeth recoverable will depend on the amount of destruction to the body. If the head has deteriorated to the point that the teeth have fallen out of the jaw, the teeth may be recovered through sifting. The teeth may still be useful for identification of the victim.

Change of Hair Color

Be careful when using hair color for the purpose of identification. If hair is still on the head it may have darkened or turned gray because of soot. The hair color may actually change to a reddish or brassy color. The same can be said for some synthetic fibers.

Damage/Patterns Match Up

Look for inconsistencies. Always consider the surrounding fuel load when assessing the damage to a body. The burned body will have burn patterns on it as with any fuel load.

Dress

The investigator should pay attention to and record the type of clothing the victim is wearing. There is usually some clothing left under the victim that will indicate the type. The investigator would want to find out if the victim is dressed appropriately for the fire scenario.

Type and Relationship of the Evidence

When evidence is located, it is very important to record and diagram its relationship to the body's location and the surrounding area. When recording the evidence, place it both by measurement and geographically to the body(s) and structure.

Even though the fire may destroy "trace" evidence, some types may survive. For example, latent prints may survive on unpainted metal. Look in areas that have been protected during the fire.

Clothing that is under the victim may also survive the fire. The clothing may contain many types of evidence and a conflict could arise. If the clothing is bloody and/or has flammable liquids on it, the investigator will have to make a decision as to what is more important. Blood must be air dried, while flammable liquids need to be placed in an airtight container. In this situation, one of the two may be lost as evidence. This type of conflict is also possible in other areas of the investigation.

Weapons (gun)

With a thorough, careful examination and sifting of the debris, shell casings and bullets may be located. Their relationship to the body(s) and the surrounding area are most crucial. The same can be said for any item that could be a weapon. Even burned shell casings and bullets may provide comparison evidence.

Cartridges may "cook off" (discharge) during the fire. This can happen while the cartridge is in a weapon or outside the weapon. If the cartridge was in a weapon when it cooked off, then the velocity will be high. The cartridge could penetrate bodies or other fuel load in the area. The bullet will have lands and grove markings but the primer will not show firing pin impressions. If the weapon fell off a shelf or through the floor during the fire, it may have fired by the firing pin. If the cartridge is outside of a weapon, the velocity will be slow. The cartridge may show evidence of internal pressure build up prior to the bullet leaving the casing. In this case, the bullet will not have lands or grove markings.

Questions the investigator will want to answer.

- Was the victim holding the weapon before the fire?
- Did the weapon fall off a shelf or through the upper floor?
- Did the suspect drop the weapon after shooting the victim?

The debris should be layered and analyzed near the weapon. The analysis of the debris may tell the investigator when and how the weapon got to that location. The weapon may still have latent prints on it. Striations from the firing pin, firing chamber and extractor, plus markings of lands and grooves may still be evidence.

Knife

The investigator must find out how a knife got to the position where it was found. The recovery of latent prints may still be possible. The pathologist will want to compare the wounds on the victim with the cutting edge of the weapon.

Placing the Item of Evidence

The investigator will want to place the item of evidence geographically with the scene and the victim. Position of weapon may be of primary importance.

- Could it have dropped into the position it was found?

- Was it placed or dropped by the victim or someone else?
- What side of the victim is the weapon on?
- Is the victim right or left handed?
- Is the suspect right or left handed?
- ***Do not*** discount any possibility of tool marks or comparison type of evidence at any fire scene.

FIRE SCENE EXAMINATION

Processing and Examination of the Scene after the Removal of the Body(s)

1) Remove the body(s) with great care. Remember that burned bodies are very fragile.

2) Each room in the structure should be sectioned out by some method that has been agreed upon by the team. The type and size of the structure and amount of damage to the structure usually dictates the method used. The sectioning is usually in one or two foot squares. Use some type of visible string to mark the grids. The grids are then numbered for identification.

3) The inside teams should hand search, by layering the debris, each grid of the sectioned-out rooms. As evidence is located it should be measured, photographed, and collected. This information should be placed on a detailed work diagram. As the hand search continues the leftover debris should be placed in paper bags. The bags should be marked with the time, date, investigator's name, and location or grid number where the debris came from. The bags should be taken out to a designated location while waiting for the sifting teams to process them.

4) It is important to remember that these inside teams not only need to be familiar with crime scene investigation, but also fire investigation.

Sifting Teams

The sifting teams need to be set up near the structure but not near enough to contaminate the scene. At least three screens should be used. The screens should be set up so debris will drop through the top screen onto the next screen below and so on. The top screen should be at least 1 inch. The next screen below should be ½ inch and the bottom ¼ inch. Some screening sets have a fourth that is window sized to catch very small debris.

The screens may be fabricated from 2"x4"s and at least 2-foot square. The rack to hold the screens may be fabricated from 2"x4"s that will allow the screens to slide in and out. With this system, each

screen can be emptied and replaced as they are searched. The rack should be built high enough for comfort of the sifting teams who will be searching the debris.

Each sifting team should sift one bag of debris at a time. A water process should be used, as it is the least damaging to the evidence. A hose line, usually the booster or hard line, can be used for the water processing of the debris. The evidence is already wet so the water will not damage it further. Sifting down through the screens with water also cleans the debris so evidence can be identified. The debris *should not* be pushed or mashed through the screens by hand. Pushing and mashing the evidence through the screens may damage the evidence and destroy its value.

As evidence is located, it should be collected in the usual manner. All evidence should be photographed, as it is located. The location or grid number should be placed on the evidence tag, and this information should be placed on the working diagram. All unknown items that may be evidence should be placed back into the original paper bag or another with original information. These items will be analyzed later by the lead investigators. All other left over debris should be placed in a single pile near the sifting location. The evidence located by this method may have to do with origin and cause and/or crime.

The Fire Death and Fire Scene Examination

The fire death and fire scene examinations are conducted simultaneously. During and after the examination of the debris conducted by hand search all the "normal" fire investigation techniques must be used. The investigators must still come to a conclusion regarding the origin and cause of fire.

FIRE DEATH INVESTIGATIONS

A severe, extensive burn is one of the greatest insults to which the human body is subject. Injury by burns and fire constitutes a major problem in the United States. It is estimated that during the year ending April 1974, there were 5,575,000 household and property fires in the United States. According to the *NFPA Journal*, September/October, 1993 issue, in 1992 there were 1,964,500 structure and property fires in the United States. Of these fires, 472,000 were residential fires, with the remainder in automobiles, boats, wildland, and other structures. The property loss was estimated at $8,285,000,000 in those fires. Many fires kill three or more individuals. In 1992, for example, there were 35 multiple-death fires claiming 176 lives for an average of 5.03 persons per fire. The largest loss of life in a single fire in 1992 was 11 people. The United States Department of Health, Education and Welfare estimates that each year approximately 100,000 persons are treated for burns in hospitals for a total of two million days; that three to six million visits are made to doctors because of burns; and that the cost of such treatment is in the neighborhood of one billion dollars. The July 1979 issue of *Reader's Digest* reported that 2.5 million people were burned in the preceding year, one-third of them children, and nearly 100,000 persons were hospitalized. Fire was the leading cause of death in individuals under the age of

40, and fire constituted the third leading cause of death in all age groups. Recently, a report was compiled by John R. Hall, Jr., of the National Fire Protection Association (NFPA)[1] indicating that the average number of burn injuries in the United States during 1985-87 was 1,753,000. This is a 30% decline in burn injuries since 1978.

General Considerations of Fire Death Investigations

The investigation of deaths due to fire is a team effort. Successful outcome depends upon the contribution of each person and agency. Failure to cooperate will adversely affect the quality and adequacy of the investigations.

It is extremely important that the pathologist responsible for the autopsy of fire victims receives full information from the fire investigator involved in the investigation of the particular fire situation. Full knowledge of the cause and circumstances of a fire constitutes a guide to the likely severity of the injury. For example, a scald or injury due to hot water is most likely a partial thickness injury confined to the body surface. In comparison, an injury due to flame, if sustained in an enclosed space, most likely will result in a deep burn, with a significant likelihood that heat injury of the respiratory tract is present, possibly even with inhalation of toxic products of combustion into the body.

Residential fires account for the majority of multiple deaths. This is because of the leading role of smoking materials, the presence of upholstered furniture, the large number of fires that start during sleep, the failure of many individuals to escape the scene even when aware of the combustion process and the presence of so many children under the age of 14.

Age characteristics are important because the type of injuries sustained is likely to be related to age. Typically, between the ages of birth and three years, injuries are due to hot fluids or steam, and are referred to as scalds. Between the ages of 3 and 14, flame burns predominate. Between the ages of 15 and 60, industrial accidents predominate. Over the age of 60, burns are usually associated with blackouts, home fires, and smoking in bed. Statistics indicate that about 80% of burns occur at home, and that industrial enviroments are 15 times safer than the domestic environment.

Common ignition sources that result in injury are: smoking on furniture, smoking in bed, a hot object in contact with fuel of some kind, open flame near bedding, a fuel-fired object and a structural item, open flame with upholstered furniture, open flame and fuel and electrical overloads or arcing.

From a medical standpoint, a burn can be defined as injury due to heat. The word "burn" used alone implies causation by heat. Used with other words preceding it, the cause of the burn is specified or

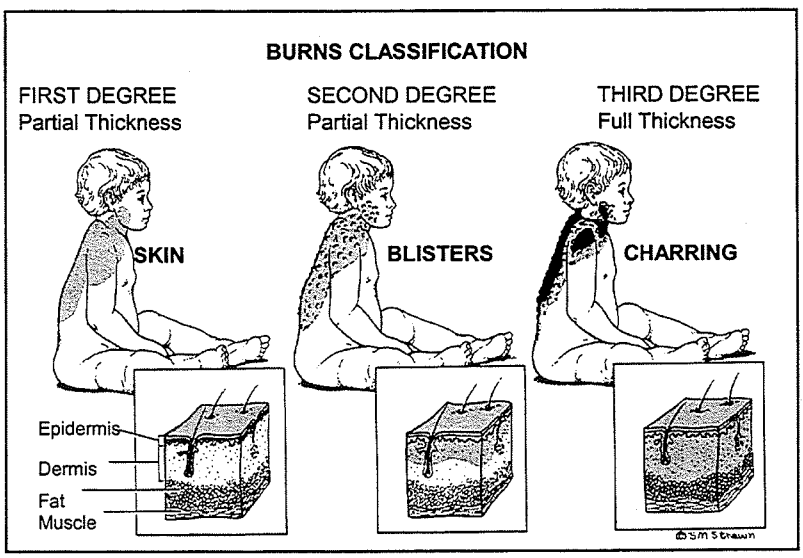
[1] *Burn Injuries in the U.S.*, July 1992, John R. Hall, Jr., Fire Analysis and Research Division, National Fire Protection Association, Quincy, MA.

modified. Thus, one may refer to flame burns, flash burns, radiation burns, electrical burns, friction burns, or chemical burns. All are frequently called "thermal burns."

The term "chemical burns" may be confusing because severe injury to the body may occur in the presence of little or no heat. Body proteins are coagulated by chemical action instead of by heat. The result may be surprisingly similar in terms of both appearance and risk.

Degree of Burning

A potentially confusing issue is the degree of burning, which relates to the depth of burning and involvement of the skin and underlying tissue. Whenever heat is present in a locality, it may be transferred to body surface by any combination of conduction, convection, or radiation.



At about 45°C (113°Fahrenheit), there will be little or no cell damage. At about 47° to 48° (116° to 118° Fahrenheit), there will be some denaturation or alternation of protein elements, but recovery can occur if exposure is short. At about 60°C (140° Fahrenheit), there is coagulation of proteins. Cell death is inevitable. It must be emphasized, therefore, that circumstances surrounding the injury are important. Anything which influences the transmission of the heat to the body tissues will have a direct bearing on degree of injury and the features likely to be encountered. It is obvious that a fire fighter in a synthetic heat-reflecting suit is less likely to sustain injury than an individual exposed to fire without any such protection. However, even in the so-called unprotected individual, there are factors that may influence the severity of any burns sustained. The presence or absence of clothing and the color and nature of the material are important. Hair, skin oils, and the keratinous layer of the skin afford some protection. The amount of heat absorbed by the skin will depend upon its condition, and even its color. The water content of the skin is significant. The efficiency of the circulation will govern the amount of heat carried away.

Human skin is made up of a number of layers. The outer layer is referred to as the epidermis. Beneath this lies the interlayer, or dermis, which is sometimes referred to as corium. Beneath this are fatty tissues. The severity of burning is described in relation to these various layers. It may be referred

to as a partial thickness or a full thickness injury. The latter is applicable when burning has destroyed the skin and has extended inward as far as the underlying fatty tissues.

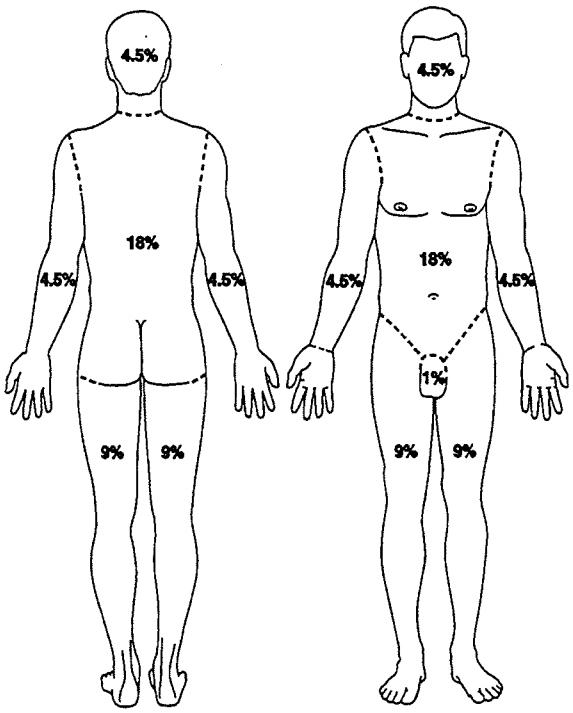
Typically, a superficial burn (first-degree) involves only the exterior layers of the epidermis. There is dilatation of the superficial blood vessels. A burn of this severity could be from sunburn or from exposure to a sunlamp. The skin in a living individual is red and balances with pressure. Sensation is present. There may be mild pain and itching. Blisters do not form.

In partial thickness burns (second-degree), the epidermis is destroyed to its base layer. The deeper skin structures are preserved. Such burns commonly result from scalds, sudden exposure from flash fires, and some chemicals. The skin blisters, becomes red, weeps or exudes moisture, and may wipe away. The color balances with the application of pressure. Sensation in the form of pain is present.

In full thickness burns (third degree), there is destruction of all skin elements. This involves both the epidermal and the dermal layers. There is even coagulation of the underlying blood vessels. Such burns typically result from flames, immersion in hot fluids or contact with other chemicals. In the living person, the skin is dry, white, leathery, pale, possibly charred, and inelastic with visibly clotted blood vessels present. Sensation is absent after the initial pain of injury subsides, since the skin nerves are destroyed. In a living person, this is an ominous sign.

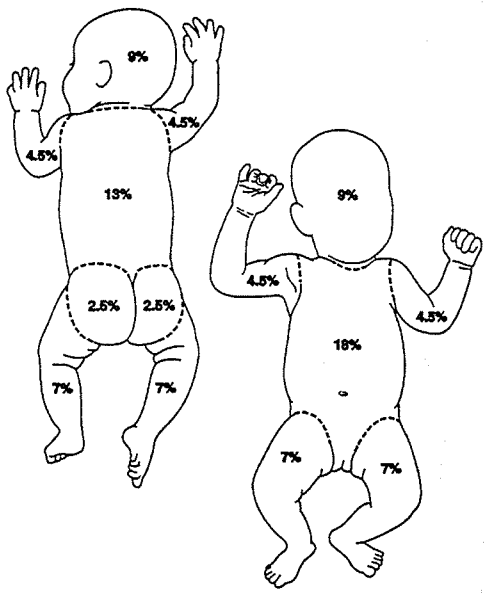
Full thickness burns also describe damage severe enough to remove all skin and take the burn level down to involve muscles, bone and other deep structures. Such burns typically result from exposure to electrical energy or flame. The tissues are charred, cooked, and shrunk. Bones may be exposed. Sensation is absent once the nerves beneath the skin have been destroyed.

CLASSIFICATION OF BURNS IN ADULTS
Critical Burns
• Full-thickness burns involving the hands, feet, face, upper airway, or genitalia • Full-thickness burns covering more than 10% of the body's total surface area • Partial-thickness burns covering more than 30% of the body's total surface area • Burns associated with respiratory injury (smoke inhalation) • Burns complicated by a painful, swollen, and deformed extremity • Burns on patients younger than five or older than 55 that would be classified as "moderate" on young adults
Moderate Burns
• Full-thickness burns involving 2% to 10% of the body's total surface area (excluding hands, feet, face, upper airway, or genitalia) • Partial-thickness burns covering 15% to 30% of the body's total surface area • Superficial burns covering more than 50% of the body's total surface area
Minor Burns
• Full-thickness burns covering less than 2% of the body's total surface area • Partial thickness burns involving less than 15% of the body's total surface area • Superficial burns covering less than 50% of the body's total surface area

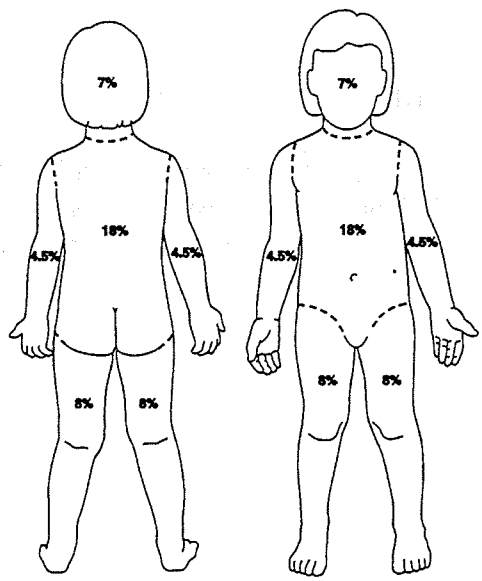


Estimating the area of burning involves estimation of the surface area involved. This is usually overestimated. Exposure to flame and heat, and discoloration of skin, may lead the inexperienced individual to believe that tissues are burned which are perhaps only blackened by smoky deposits.

Perhaps the best guide to help ascertain the percentage of body surface burned is referred to as the "rule of nines." In this method, the head is regarded as 9% of the body. Each arm is 9%. The back and the front of the chest each constitute 18%. Each leg constitutes 18%. That leaves 1% for genitalia. The significance of the area of burning is that one can predict from it the likelihood of survival.



The chances of survival vary with age. The best age for survival is generally in the mid-20s. The statistical chances of survival are reduced in childhood when the body surface area is relatively large in proportion to the amount of body tissue, and in old age where the ability to resist physical insult declines. It is possible to combine measurements of depth of burning and surface area burns numerically, which may be referred to as "burn index." In calculations of this sort, a point is assigned for each percentage of third-degree burn, .5 point for each percentage of second-degree burning, and so on. For a certain level of points, there is a corresponding likelihood of mortality.



The investigator, therefore, may encounter reference not only to the severity of burning, but also to the area involved, or to a combination of those in some kind of index. The medical significance is to give insight into the severity of insult and the probability of survival.

Early Questions for the Investigator

Several questions need to be answered whenever an investigator is confronted by human remains recovered from a fire.

What was the manner of death, and was the fire intended to conceal or cause a crime? For example, there may have been an attempt to conceal a shooting incident by subsequent setting of a fire. The setting of the fire itself may have been intended to cause death. An individual who is committing suicide may set a fire immediately before taking his/her life. There are many instances where fires are used in an attempt to conceal insurance frauds such as theft of property.

Who is the deceased person? This is often overlooked. There may have been criminal substitution of identity. All fire deaths constitute a routine identification problem to ensure the individual found dead is indeed the one expected to have been found.

Was the dead individual alive at the time of the fire? Indicators may include the effect of soot or heat in the airways, swallowed soot, and the presence of carbon monoxide in the blood. Other toxicology is helpful.

Why did the deceased person not escape from the fire? There may be multiple possibilities. High levels of alcohol, carbon monoxide, or drugs may be detected. The exits may have been obstructed. If this is so, this fact must be communicated to the pathologist by the on-the-scene investigators.

Manner of Death

Manner of death is defined as the fashion or circumstances in which the cause of death arose. There are essentially five manners of death: natural, accidental, homicidal, suicidal, and undetermined. Occasionally, experts try to make a distinction between undetermined and unclassified. A death in a fire is most likely to be accidental. A certain number of deaths in fires are natural. Occasionally, homicides will be concealed by fire. Very occasionally, suicides are encountered. From time to time, circumstances are such that one cannot make a definite decision, leading to the classification of the manner of death as undetermined. It is advisable to regard all cases of death involving fire as potential homicides until investigation shows otherwise.

The ordinary house fire seldom attains sufficient temperature to result in complete destruction of the adult human body. Adults usually remain, at least in part, although children ash rapidly. Animals may be destroyed. Cremation requires 1800° to 2100 F for 1 to 2 hours. At the end of that time, there still may be 2-3 pounds of ash and bone fragments that are clearly recognizable as human. In contrast, chemical fires can reach several thousand degrees and cause far more damage to human remains, including even complete destruction of an adult.

The inexperienced fire investigator is likely to make several common mistakes as far as human remains are concerned. By far, the most troublesome assumption is that charred remains are not worth examining. This is despite the fact that most individuals are familiar with the phenomena of charred steak, in which someone places a steak completely blackened and almost converted to charcoal on the outside, yet centrally there remains relatively well-preserved and edible meat. A similar phenomenon applies to the heating of human tissue, in that a body that may appear externally blackened and charred with exposure of bones and muscles may conceal in its interior much valuable information. For example, even raising an arm may disclose relatively unaffected skin in the armpit region. Similarly, unaffected skin may be found beneath tight clothing and in other protected areas. It is known that human hair may undergo some color change with exposure to heat. Black hair appears to change little. Gray hair turns blonde with heat. Brown hair may turn slightly reddish. The most common error by far is failure to make allowance for superficial deposits of soot, which may lead to the conclusion that the hair of the deceased was darker than was in fact the case.

Drying or exposure to heat may cause some shortening of the body. This leads to faulty estimates of stature. Bones exposed to heat may shrink considerably. Even slight drying and slight bending of the body may combine to result in an apparent loss of several inches of body length. As much as 60% of body weight may be lost due to drying out.

Skin tends to shrink and tighten when exposed to heat. This may lead to an alteration of facial features, obscuration of scars, moles and tattoos and erection and firming of breasts, all of which may lead to erroneous estimates of age. In addition, if an individual dies with one limb exposed to heat rising from beneath, contraction of skin on the exposed side may lead to splitting and tearing of skin on the other side. This could lead to mistaken belief that severe injury was incurred by some other agency. Unburned skin around the ankles and wrists may indicate that the victim was bound during the fire.

Heat also causes contraction of human muscle. This contraction may lead to movement of limbs, faulty estimates of position, false rigidity or stiffness of muscles that may be confused with post-mortem rigidity, and bone fractures if the muscles are sufficiently powerful to cause breakage. The classic pugilistic attitude of burned bodies where the arms are bent at the elbow, the upper arm is pushed slightly forward the hips slightly flexed, and the knees slightly bent, is simply due to the fact that the bending muscles of the limbs are usually stronger than those used for straightening. Occasionally the expert is confronted with an x-ray or picture of the body and asked if the x-ray leads to a specific conclusion. The position of the body may be a direct consequence of heat. This does not affect the consideration of location of the body in terms of attempts to escape, obstruction of exits, or overall location in room or building.

If the skin is exposed to a limited amount of heat, the superficial layers, including the nails, may peel off like a glove. This may lead to tattoos becoming more obvious, particularly in dark-skinned persons. The peeled skin will yield a specimen that can be examined. The ridge pattern of the skin glove in many

of these cases can be printed. The underlying tissues often can be examined for ridge patterns in the usual fashion.

Burned bodies should be x-rayed. The burned body surface may be very difficult to examine for evidence of injury and other important features. X-rays are helpful in the search for bony abnormalities and dental characteristics that may assist with the identification of the deceased, and in the search for foreign bodies such as bullets and other evidence of criminal activity.

Just as the tissues internally may be relatively well preserved for purposes of visual examination, this same preservation may enable the collection of specimens valuable for chemical analysis. The presence of high levels of drugs, alcohol, or carbon monoxide may explain why the victim did not escape the fire, or may confirm that the individual was alive at the time the fire started.

Individuals who die in fires may breathe a number of noxious substances that may include chemicals such as sulphur dioxide, nitrogen dioxide, hydrochloric acid, hydrodicyanide, hydrocarbons, carbon dioxide, and carbon monoxide. Because some plastics decompose under the influence of heat into cyanides, cyanide compounds are worth looking for.

Several things are commonly sought at the time the body is examined in order to prove that the individual was alive at the time the fire started. The most commonly mentioned is the presence of sooty material within the windpipe or trachea. Assuming that the body is not so destroyed that the windpipe is burned open in the neck, the presence of sooty material deposited on the lining of the windpipe or other air passages indicates active breathing a the time the sooty material was in the air. Occasionally, soot may be swallowed and recovered from the esophagus or stomach.

Carbon Monoxide

Carbon monoxide is the product of incomplete burning of carbon-containing compounds. Normally, the red element of the blood (hemoglobin) combines with oxygen and transports it throughout the bloodstream. Blood coming to the lungs yields carbon dioxide and then carries a load of oxygen back to the tissues. There it is released and exchanged for carbon dioxide to be carried back to the lungs. In the presence of significant levels of carbon monoxide, the carbon monoxide has a greater affinity for the hemoglobin than oxygen does. The result is that the hemoglobin of the blood attaches to the carbon monoxide. This renders it incapable of carrying its usual quota of oxygen to the tissues. The combination of hemoglobin with carbon monoxide is called carboxy-hemoglobin (COHb). It is a cherry-red color. This led to the classic description of individuals who died in a fire as being cherry red or cherry pink. The higher the level of carbon monoxide in the atmosphere, the worse and more dangerous the situation. The deeper the breathing and the more active the circulation, the greater the risk. This is because a person with low metabolic activity lying in bed and taking relatively shallow breaths will draw in less of the noxious atmosphere than one who is working or who has just completed some strenuous activity in

the course of attempting to escape the fire. This has led to the derivation of a number of formulas, all of which indicate the degree of severity in terms of concentration of the gas in the air and the duration of exposure.

Carbon monoxide is such a threat that a number of detection devices have been developed over the years. These may be chemically treated patches which are attached to control panels of aircraft, detection devices for use in industrial and mining environments, and small analyzers to carry in the course of investegatory work.

Carbon monoxide combines with the hemoglobin of the blood, displacing oxygen and diminishing the oxygen-carrying capacity of the blood itself. Carbon monoxide alters the breakup characteristics of the normal oxygen hemoglobin combination, making it more difficult for that oxygen which remains to be released to the tissues. If carbon monoxide enters the bloodstream and attaches to the hemoglobin, its half-life is about 5-6 hours. This means that after a 5-6 hour duration, breathing air under average circumstances, about one-half of the carbon monoxide will have been eliminated. The elimination process is speeded by a factor of three to four times if oxygen is administered.

Carbon monoxide may be responsible for death in either an accidental or a suicidal manner. In the accidental case, an individual may be inadvertently exposed to the gas in a fire or other circumstances. In the case of a suicide, a person may go to the garage, start a car, and sit there until death ensues from carbon monoxide poisoning. Significant blood levels of carbon monoxide may be found in heavy smokers. Levels of 5% to 10% are common. Higher values have been recorded. In one exceptional instance, a very heavy smoker sat in a small, poorly ventilated office for a number of hours and succeeded in attaining a 17% carboxy-hemoglobin level. Any natural disease may render an individual more susceptible to death because of carbon monoxide. For example, an individual who has severe lung disease is less able to sustain a high level than is a healthy teenager. Carbon monoxide levels in the air are easy to measure by way of easily available and reasonable cheap equipment. Blood levels are expressed in terms of the percent of saturations, which is that proportion of hemoglobin pigment in the blood that is combined with the gas. Blood saturation levels tend to be higher in individuals committing suicide than in accidental deaths associated with fire. Oxygen necessary to survival may be consumed by fire, and death may ensue long before the carbon monoxide level rises to a point that would otherwise be sufficient to account for death. A pink coloration is often observed in the skin and tissues; however, this can be confused with exposure to cold and to cyanide poisoning. The coloration may be difficult to observe. About 35% or more of the hemoglobin must be saturated with carbon monoxide to permit easy observation. It is suggested that all vehicle operators be examined for the presence of significant levels of carbon monoxide on a routine basis. Any person dying in a heated premise during cold weather should also be examined.

Just how much carbon monoxide in the blood is necessary to result in death? There is no exact level because individuals vary in their ability to resist. A world class endurance athlete in prime physical

condition, who has an excellent blood count and superb cardiovascular conditioning, may be able to sustain a 40%-50% involvement by carbon monoxide without serious consequences. An elderly woman with a combination of heart disease, hardening of the arteries, emphysema, and arthritis may be killed by a level of carbon monoxide in the blood that might not even cause the athlete to have a headache. Children and small animals tend to be much more susceptible to carbon monoxide than adults.

Review of the literature indicates a number of characteristic approximations about carbon monoxide. Between 0%-10% saturation, there are relatively few symptoms, perhaps only a slight loss of mental acuity. Between 10%-20% saturation, there may be a slight headache, tightness across the forehead and perhaps some dilation of skin blood vessels. Between 20%-30% saturation, there may be a severe headache and throbbing in the temples. Between 30%-40% saturation, there may be severe headache, weakness, dizziness, dimness of vision, confusion, nausea, vomiting, and collapse. At 50%-60% saturation, there may be fainting, increased breathing rate, possible coma, intermittent convulsions, and irregular respiration. Between 60%-70% saturation, there may be intermittent convulsions, depressed heart action, and death. At 80%-90% saturation, there may be a weak pulse, slowed respiration, respiratory failure, and likely death.

Carbon monoxide can be found in burn cases in four main categories. It may be extremely high and represent the immediate cause of death. It may be at a moderate level and have been on the rise, but death supervened due to fire or lack of oxygen. It may be quite low, but not due to the fire, as for example if it were due to smoking. It may be absent even though death was due to fire. A flash fire where death is almost instantaneous, or where an individual is exposed to fire outdoors or in conditions of good ventilation, will not yield carbon monoxide in the blood.

Chemical analysis of blood from a dead person cannot measure the absence of oxygen (referred to as anoxia) or reduction of oxygen below the level necessary to sustain life (referred to as hypoxia).

Carbon monoxide is occasionally indirectly responsible for the presence of skin blistering, particularly those who survive. It is not entirely clear why it occurs. Coroners and medical examiners may encounter cases in which individuals who have died a number of hours after exposure to carbon monoxide have blistering over joints. This may be some reflection of inability to maintain the skin condition at reduced blood oxygen levels.

Examination of the Skin

Other circumstances can be confused with injury due to burns. Skin blistering occurs in the presence of second-degree burns. It is also seen in association with exposure of the skin to gasoline, and with post-mortem decomposition. Exposure to water is variant, but this is usually obvious. An individual involved in a car crash, in which gasoline gets onto the skin without burning, may have injuries to the skin that appear almost identical to flame burns.

Another question is whether one can tell from visual examination of the skin if the person was alive at the time a burn was incurred. A red margin surrounding a wound does not necessarily indicate that a person was alive at the time injury was sustained. There is a simple familiar reason. When a piece of meat is heated on a barbecue, for example, the juices come out. Similarly, when skin is heated, it tends to shrink and contract under the same influence. Any blood which was lying within its vessels tends to escape to the nearest adjacent unheated area, with a resulting red margin occasionally visible around an area of exposure to heat. Most individuals, who are sufficiently exposed to fire to cause death, die within a time interval too short for the occurrence of any living reaction to heat. Heated tissues do not react in the same fashion or as rapidly as unaffected tissues. Trained pathologists cannot determine through examination of burns alone whether the burns were sustained before or after death. Other circumstances have to be relied upon to reach that conclusion. Focal skin slippage on a body undergoing early decomposition may allow drying, appearing somewhat similar to burns. The distribution and location of burns on the body surface should always be recorded by photographs and diagrams.

Examination of the Head

The human skull consists of two layers of fairly hard or compact bones separated by an intervening latticework of so-called spongy bone. Blood and bone marrow components are found within the spaces. If the surface of the head is exposed to sufficient heat, the blood within the space between the two layers of bone may expand and boil. This blood has to go somewhere. One of the places it tends to go is between the inner surface of bone and the tough fibrous lining of the skull. It happens also in skull fractures that blood may accumulate in the same location. There is a potential source of confusion between hemorrhage due to fire and hemorrhage due to skull fracture. In most instances, it is possible to distinguish the two, in that the hemorrhage due to fracture is associated with a fracture, is relatively localized, is usually concentrated on the sides of the head over the convexities of the brain, and is not associated with heat. In contrast, the bleeding between the bone and the lining of the skull due to heat tends to be more widely spread, thinner, bilateral, and clearly associated with heat. The question may be complicated when the heat has been sufficient to cause flaking and fracture of the bones of the skull. Skull fractures due to thermal burns are typically circular, radiating from one point, usually the point where the scalp is fully burned away. Skull plates may be bowed outward by pressure from the cooked brain. Heat fractures usually do not occur along the lines where the skull plates join naturally, particularly after adult growth is reached. When maturity is reached, the suture lines are stronger than the rest of the skull. Each suture has a different rate of closure. Age estimates may be made based on the relative closure of the various sutures of the skull. Skull fractures due to thermal burns rarely involve fractures to the base of the skull. Such injuries are clear indicators of other violent injury.

Time of Autopsy

An autopsy can be delayed several hours in the case of a body found in a fire. Usually if death truly took place in the fire, and tissues are cooked, autopsy can be delayed long enough to acquire helpful circumstantial information.

No embalming agents or preservatives should be used on the body. If death was delayed and the victim was treated in the interim, it is not advisable to postpone examination of the body more than a few hours. Rapid tissue changes commonly associated with infection may be misleading, and microbiological evaluation may be less reliable.

Artifacts of Treatment

In a person who has survived long enough to be treated, there may be widespread changes due to surgical removal of dead tissues, color changes resulting from treatment (especially the application of silver nitrate), and changes in the bones due to treatment of fractures or metal pins inserted through the bones. Fluids may also be infused into the tissues and there may have been skin grafting. There may be scar formation in response to injury. Accumulation of fluid may distort the facial features of survivors. The shrinkage of skin due to application of heat may endanger the subsequent circulation. Cuts may have to be made down the limbs, generally on the inside or outside of the arms and legs, in order to release tension and promote circulation in surviving tissues. Such features might be mistaken for ante-mortem injuries. The areas from which skin is taken for grafting typically show two to three inch wide strips of altered skin, and partial healing where the superficial layers of the skin have been removed by a device like a mowing machine using an oscillating blade.

Ulceration

Ulceration of the stomach and duodenum is another feature common to many burn cases. These ulcers may be referred to as Curling's ulcers, after the physician who described them. Significant bleeding or perforation of the stomach occurs in about 12% of burn case survivors, roughly in proportion to the area of body surface that is burned. Roughly half of these ulcers and bleeding sites will be in the stomach, one-third in the duodenum or upper small bowel, and one-sixth in both locations. These may be the immediate cause of death following a burn. Surgery may be necessary to treat leakage or bleeding in those who survive long enough to develop this condition.

Electric Burns

Electric burns pose a few problems. Electric burns may be larger and deeper than anticipated, since the heating occurs internally due to the passage of electric current. Classically, in internal heating, the surface hairs of the body are intact, yet the underlying tissue is burned.

INVESTIGATION OF A FIRE-RELATED DEATH

A burned or severely charred body should never be regarded as useless for an autopsy. An illustrative case will be helpful. A car was found burning adjacent to a public school early one morning. After the fire was put out, the remains of a young adult male were found in one of the front seats. The fire had been so intense that the windshield melted and buckled inward, solder ran out the doors, and paint peeled from the exterior of the car. Only the interior of the car was involved. An almost full tank of gasoline remained unburned beneath the rear of the car because of the efficiency of the local fire department. The severely charred body was taken to the medical examiner's office where an autopsy was performed. Despite massive destruction of the exterior of the body, x-rays disclosed that the physique and skeletal structures were consistent with male gender. The license plate of the car led to the name of the possible occupant. That individual had previously had considerable dental work done. The mouth disclosed well-preserved teeth that were used to identify the individual when the teeth were compared with known dental records made during life. The presence of soot within the windpipe and stomach indicated that the deceased had been alive at the time of the fire. Opening of the body disclosed well-preserved internal organs. Analysis of blood from the aorta disclosed a blood-alcohol level of .29%. The level of carbon monoxide within the blood was 25%. From an examination of the body, identity was confirmed, and a reason for his failure to exit the car was obtained. The fact that the car had burned violently from within indicated that the manner of death was probably homicide. The case was successfully concluded.

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CALIFORNIA DEPARTMENT OF JUSTICE
BUREAU OF FORENSIC SERVICES

PHYSICAL EVIDENCE BULLETIN

COLLECTING EVIDENCE FROM HUMAN BODIES

INTRODUCTION

The collection of evidence from the body of a deceased person requires the cooperation of the Coroner's Office (Public Administrator) and all law enforcement agencies. Typically, the Coroner's office has jurisdiction over the body of the deceased. It is extremely important that any evidence collected from the deceased be collected with the knowledge and permission of the Coroner's Office. It is important that the coroner's office be advised of what was taken, how it was taken, and that any evidence collected is made available to the pathologist.

This bulletin will describe the types of evidence that might be recovered from human remains. It is important to note that some evidence will be much better preserved if it is possible to collect it at the crime scene rather than at the morgue. Evidence that can be irrevocably altered during transport includes bloodstain patterns, bite marks, gunshot powder residues, and the location of important trace evidence. When necessary, remove clothing at scene. In addition, biological evidence (e.g. semen evidence taken by swabs from body cavities) may be better preserved if it is collected as soon as possible, dried, and stored frozen. Although it may be desirable to collect such evidence at the crime scene, it may not always be possible due to conditions at the scene or the policies of a particular Coroner's Office. In this case, photographs must be used to capture important pattern and location information before the body is moved.

GENERAL CONSIDERATIONS FOR THE COLLECTION AND HANDLING OF EVIDENCE

I. Safeguards while handling biological samples include:
   - A. Treat all biological samples as infective material. Follow your agency's Blood Borne Pathogen plan.
   - B. Wear gloves.
   - C. Dust mask should be worn if dealing with dried stain material that becomes airborne.
   - D. Keep any contaminated surface (e.g. gloved hand) away from face to prevent contact with mucous membranes (e.g. eyes, nose).
   - E. After dealing with evidence, properly dispose of gloves and wash hands with germicidal soap.

II. Photography - Close-up photography
   - A. Maintain the film plane parallel to object being photographed
   - B. Fill the frame with the subject matter and appropriate scale
   - C. Use appropriate ruler or scale/sometimes it may be important to also take a photograph without a scale.

D. Take photographs as examination/autopsy proceeds. Insure that overall photographs of all body surfaces are taken before and after the body are unclothed and cleaned up. Insure that both the outside and inside surfaces of both hands are photographed.

III. Package and handle evidence to minimize potential contamination or cross-transfer

A. Change gloves and thoroughly clean implements (e.g. tweezers, razor blades, saws) when collecting samples from different sources (e.g. two different bodies)

B. Use separate containers for different items

C. Use sheets of paper to minimize contact between different surfaces of the same evidence item

IV. Biological evidence will deteriorate rapidly if not handled appropriately

A. Dry samples as soon as possible

B. Package biological evidence in paper (not plastic) bags. Samples of bone or tissue can be packaged in plastic but should be immediately stored in the freezer.

C. Freeze biological evidence (except for vials of liquid blood which should be held refrigerated)

V. Label all evidence containers appropriately with an indelible marker

A. Include adequate description of what the object is and location it was found

B. Include name of person collecting evidence, when it was collected

C. Keep track of all evidence items through the use of item numbers and/or an evidence list

D. Seal each container with tape. Mark seal with date and initials of collector.

ISSUES TO CONSIDER

IDENTIFICATION OF DECEASED

- Fingerprint the deceased. Ensure that any rolled fingerprints or palm prints are legible before releasing the body. Depending upon the condition of the body, it may be necessary for the pathologist to remove either the fingers or digital skin.
- Take identifications photos of the deceased's face (from several different views) and any identifying marks such as scars or tattoos.
- It may sometimes be necessary to rely upon a forensic dental examination. It may be necessary to take appropriate x-rays or remove and retain jaw structure.

DOCUMENT WOUNDS/INJURIES

- Insure that close-up photos are taken of all wounds (including defense wounds) before and after cleanup. Consider numbering multiple wounds.
- Bite marks should be carefully photographed with a scale. Take photographs using both available light and flash. Hold the flash unit at oblique angles to capture all impression information. Consider using specialized lighting (e.g. UV/IR) to enhance any impression information. Collect saliva from bite mark using a swab slightly moistened with water. Be sure

that a control is taken from an area unlikely to have saliva. Consideration should be given to casting the bite mark to preserve any three-dimensional information using any appropriate casting material (e.g. microsil).

- Examine the body for imprints that might have originated from the crime (e.g. ligature or shackle marks, shoe sole impressions or vehicle tire /component marks). Carefully photograph any imprint with and without a scale. To reveal more detail, consider using a specialized light source to illuminate any such area. These areas can then be taped to collect any trace evidence. Place the tape in a smooth, plastic petri dish.
- Gunshot wounds: photograph and describe all wounds. Record and collect any loosely adhering gunshot powder residue. For distance determinations (to preserve the powder pattern), consider pressing a piece of white filter paper (soaked with white vinegar) against the skin containing the gunshot powder residue. Allow this to dry and carefully package in cardboard box.
- To document wound track and projectile trajectory, photograph penetrating wounds before and after insertion of dowel by pathologist. When possible, specify entrance and exit wounds. In the event that the wound is covered by the decedent's hair, it will be necessary to shave the hair, wash the site, and then photograph the wound.

CLOTHING

- Collect any loosely adhering trace evidence (e.g. hairs, fibers, gunpowder, and botanical material) before removing clothing from body. Note the location of this evidence and package in paper bindles before placing into evidence envelope.
- Carefully collect all garments to avoid disturbing this evidence. Fine tipped forceps or transparent tape can be used to collect trace evidence such as hairs and fibers before clothing is removed. The tape can be placed into smooth, plastic petri dishes. When removing clothing, try to remove it without cutting. If cutting the clothing cannot be avoided, do not cut through bullet holes, stab holes, or important bloodstain patterns.
- Allow all items to air dry, wrap separately in clean paper (using sheets of paper to separate different surfaces of garment) and package in paper bags. Evidence should be stored frozen if it could bear relevant biological evidence.

FIREARMS RELATED EVIDENCE

- X-rays are of considerable value in locating bullets or metal fragments. The pathologist should not use metal forceps or probes to remove projectiles. Allow any biological material to dry and package into an appropriate container (e.g. film canister/small cardboard box). Gunshot residue on hands: until examined, protect decedent's hands with clean paper bags secured at the wrists with tape or rubber bands. Examine hands for visible particular material. Gunshot residue can be collected using the recommended procedure in your jurisdiction (e.g. sticky tape on aluminum GSR collection discs).
- Powder patterns associated with gunshot wounds can be important in distance determinations. They should be carefully photographed with and without a scale. Collect and retain any loosely adhering gunshot powder/residues.

BIOLOGICAL EVIDENCE

- In the case of suspected sexual assault, collect multiple (e.g. 3 swabs) vaginal, oral, and anal swabs. Prepare at least one slide from each category of swabs. Air-dry these swabs as soon as possible and store frozen. Sexual Assault Kits can be used to collect this evidence.
- Examine the body for the presence of semen or saliva stains using an appropriate light source (e.g. Polilight). Collect any suspected stains with a swab slightly dampened with water. Collect a control in a similar fashion. Consider the possibility

that blood from the assailant might be present on the victim's body (e.g. an isolated single stain from a victim who did not bleed extensively). If indicated, breast or penis swabs should be collected for possible saliva testing. Collect a control from an adjacent area that is unlikely to have saliva.

TRACE EVIDENCE

- Collect samples of any adhering material (e.g. hair, fibers, glass, paint, gunshot residue, and particulate matter from a vehicle) from the front and back of the body before body is washed. This evidence may be collected with fine tipped forceps or by taping. Separate pieces of tape can be used to collect trace evidence from each different part of the body (e.g. right leg, left leg, etc.) and the tape then placed inside clear plastic dishes. The decedent's fingernails can be examined for damage or foreign material such as tissue, fibers, or hairs. Collect any foreign material from fingernails with a toothpick and place in paper bindles labeled with information about the location of this evidence.
- In the case of a suspected sexual assault, combings can be taken of the decedent' s pubic area.
- Examine the body for the presence of bloody fingerprints. If detected, consider enhancing these prints after photographing them using appropriate reagent spray.
- If the victim has broken fingernails (including artificial nails), consider removing the remaining portion so that it could be compared later with nail fragments recovered from another location.

REFERENCE SPECIMENS

- Hair specimens should be pulled from representative areas of the head (scalp/beard) and pubic areas. At least 50 hairs from each area should be taken.
- Obtain reference blood samples from protected, enclosed areas such as heart or major internal blood vessel. Collect two separate blood samples (approximately 5 cc each) in a yellow stopper vial containing ACD solution B and one in a purple stopper vial containing EDTA.
- If the body has decomposed, collect as many of the following specimens as possible: a sample of compact bone (e.g. femur), an intact molar (when it will not jeopardize identification), a portion of deep muscle tissue, certain organ tissue (e.g. heart or brain, NOT liver or kidney). Specimens chosen should be away from site of injury (i.e.: if head injury, do not take sample of brain tissue). Freeze specimens immediately. Do not place in preservative (e.g. formalin).
- Where drugs are suspected, collect at least 8cc each of blood and urine. If possible, separate collections of at least 8 cc of heart blood and 8 cc of peripheral blood is preferable. Liver, bile, brain, vitreous humor, and stomach contents may also be retained. Where poisons might be involved, collect at least 25 cc of blood and 25 cc of urine. Organ samples and stomach contents may be required for this analysis.

SUBMIT A COPY OF THE POLICE REPORT TO THE CRIME LABORATORY WITH ANY EVIDENCE SUBMITTED.

CONTACT YOUR LOCAL BFS CRIMINALISTICS LABORATORY IF YOU HAVE ANY QUESTIONS.

UNIT 7: INFORMATION RESOURCES

INTRODUCTION TO CASE REPORTS

This chapter discusses the importance of officer's reports, some principles of clarity, and the legal problems that may result from officers' reports.

Most officers underestimate the importance of their reports. The case report is the official record of the activity and findings of the investigation. It is very important to remember that as far as the investigation of a case is concerned, YOU ARE WHAT YOU WRITE IN YOUR REPORTS - NO MORE AND NO LESS. Great investigators and "testifiers" have often been made to appear incompetent because they failed to take the time to write clear and accurate reports . . . and because they failed to review them before going to court.

FIELD NOTES

Notes taken in the field are the basis for many formal reports written later. Field notes are frequently identified as the most important tool used by the investigator. They reduce the need to recontact people involved and provide a greater degree of accuracy about times, statements and events than memory alone.

Information that should be entered in field notes includes names and descriptions of suspects, victims and witnesses; dates and times of occurrences; exact location of occurrences and persons involved; and any other important information, such as case number, location and chain of evidence, assisting officers' activities, and type of incident.

Concerning retention of your field notes, case law has quite consistently held that it is proper for you to throw away your field investigation notes as long as (1) you destroy them in "good faith"; (2) you incorporate them into a formal report; (3) the formal report accurately reflects the contents of the notes; and (4) the prosecutor turns over a copy of your formal report to defense counsel before trial. (Gary G. (1981) 115 Cal. App. 3d 629; Seaton (1983) 146 Cal.App.3d 67; Angeles (1985) 172 Cal.App.3d 1203.)

Now, in light of Proposition 8 and the United States Supreme Court's decisions in Trombetta (1984) 467 U.S. 479 and Youngblood (1988) 109 S. Ct. 33, there is essentially no risk involved if you meet those criteria. See also Johnson (1989) 47 Cal.3d 1194, Cooper (1991) 53 Cal. 3d 771, 810, and Memro (1995) 11 Cal.4th 786, 831.)

If your department has a policy of retention then you have to adhere to your local policy. Case law requires retention of notes pertaining to confessions or admissions.

REPORT WRITING FOR THE FIRE INVESTIGATOR[1]

Reports

Documenting a fire incident can generate several different types of reports. There is the suppression report completed by fire department suppression personnel, an incident report written by law enforcement personnel, a dispatcher's log report, and a building damage report by the building official. Each of these reports will contribute relevant information to any fire investigation and should be included in the fire investigator's case report file. These reports will be considered supplementary reports. The purpose of this chapter is to demonstrate what information is required in the report completed by the fire investigator.

A comprehensive investigation report filed by the fire investigator will substantiate and support the cause of the fire, identify the need for fire prevention, and provide statistical information. A prosecuting attorney's decision to prosecute an arson case is frequently determined by the written documentation provided by the fire investigator. The investigation report is in fact, the official record of the activity and findings of the fire investigator.

A fire investigator has to be aware of the ingredients of a good report. The investigating report has to cover the whole investigation procedure: from interviewing witnesses, fire suppression crews, victims, private investigators, insurance company representatives, laboratory and forensic technicians, law enforcement officers, and financial advisors. It is important to accurately depict what the fire scene looked like prior to the fire, the resulting damage and destruction, the cause of the fire, and if it was a criminal act, how the accused is connected to the crime.

A good investigation report commences when the investigator first becomes aware of the incident and arrives at the scene. Usually, the first activities of the fire investigator are to conduct interviews and assess the fire scene. These interviews can be with the members of the fire suppression crew, the victim, and any witnesses and bystanders. The fire investigator should assess the involvement of the fire. What burned? Were there any injuries? Deaths? While conducting these interviews and first observations of the fire scene, the fire investigator will be recording the pertinent information. The most common means of recording is to take notes. Notes can be written or they can be recorded using a small portable, pocket size tape recorder.

Note Taking

Note taking appears to be an easy process. This is when the fire investigator writes down the information received or records it on a tape. This does not always happen. There are times when the fire

[1] *Excerpts from the Investigation and Prosecution of Arson, CDAA, Second Edition*

investigator thinks, "I'll remember that" or "That's important, I'll make a note of that later, I don't have the time right now." Your investigation can start to unravel right from the beginning. What happens if you do not take good notes? Your investigation report and your investigation become inaccurate. You will find yourself asking, "Who said that?" "Was the can located on the west corner or south corner of the room?" Each fire investigator should have a cardinal rule*: **Take Notes; Do Not Rely On Your Memory!*** There have been cases where fire investigators get cases, facts, and even evidence confused with other cases. Do not let yourself fall victim to this. It is not uncommon to be conducting investigations into several incidents at the same time. Besides being quite embarrassing, your whole case could be put in jeopardy. ***TAKE NOTES!***

Notes are used primarily to assist the investigator in recalling certain pieces of information. They can help an investigator recall the details of a scene without revisiting it, be used as a guide in interviewing witnesses, and serve as an outline in completing the investigation report.

Note Taking Procedure

The fire investigator should utilize a type of notebook that they feel comfortable. Many investigators use a small pocketsize notebook because of its convenience. Problems can develop in using a small notebook, when the investigator is making a sketch or diagram. A lined standard 8½"x11" inch pad is the best suited for this. It really does not matter what type of notebook the investigator uses, as long as one is utilized. Do not relay on 3"x5" index cards, paper napkins, small pieces of paper, or matchbook covers.

Many investigators use a small pocket size, loose-leaf binder type notebook. This allows that investigator to remove their notes and place them into the case file. Your notes can remain with the case file in an organize fashion. There are times when you are writing your investigation report days, and even months after the event. You must write clear and legible. When you are taking notes, do not put anything personal in them. These notes should just pertain to the current case investigation and nothing else.

If the fire investigator chooses to use a pocket tape recorder to take notes, they should make sure that the recorder is functioning properly. A new tape for each case is necessary, as well as new batteries. Moreover, always keep it secure. There have been times when tape recorders are dropped, lost, and damaged at the fire scene. Do not rely solely on your tape recording. One of the best ways to take notes is a combination of both writing and tape recording.

INTERVIEWS

The information in an investigation report is the outcome of interviews conducted by the fire investigator. An interview is the questioning of a person who is believed to possess knowledge that is of official interest to the investigation. An interrogation is usually the formal questioning of a suspect in a

custodial setting. It can be also the questioning of an uncooperative witness or victim. There is a distinct difference between an interview and interrogation. The goal of each one is to obtain more information, but typically, witnesses are interviewed, and suspects are interrogated.

Interviewing Witnesses

The persons that are usually interviewed are victims, witnesses, informants, and even suspects. At the start of the interview, you should properly identify yourself by showing the person your department identification card or badge. Introduce yourself and tell them the reason why you are conducting the interview. Move the person to a location where the interview can be conducted in a private setting. It should not be around and within listening distances of other potential witnesses.

At this time, it is strongly recommended that you keep your pen, notebook, and tape recorder put away. It is imperative that you keep the witness at ease. If you shove a tape recorder in someone's face, the person may become uneasy, and give you no information at all. This might be the first time this person has ever had contact with an official before. Be courteous. One of the most important things for a fire investigator to do when conducting an interview is to ***listen***. Investigators have a tendency to ask good questions, but they do not listen to the answer. You should be doing only 30% of the talking. ***Listen***. Allow the person to answer your question. Do not rush them. Give them time. This might be a new experience for them.

After questioning the person and going over the significant points, now is the time to take out your notebook or recorder and ***take notes***. Included in your notes should be personal information about the person to whom you talked. This should include their full name, former and nicknames, date of birth, both home and work addresses and phone numbers, and their driver's license or identification number, their description and what they were wearing. Once the interview has been concluded, it is encouraged that the investigator takes the witness to the exact location where they observed the event. This might allow the witness to remember something else or it can check on the creditability of the witness. You may be asking yourself, "They saw that from here?"

INVESTIGATION REPORTS

The importance of the investigation report cannot be overemphasized. A fire investigator can do an incredible amount of work and spend weeks, months, and even years investigating a case. The final product of their time though, is reflected in the written investigation report. A well-written and documented report reveals the time and effort that was spent on the particular investigation. A poorly written report, or one that is too brief, does not necessarily show the time and effort spent investigating the case. This includes errors in grammar, spelling, punctuation, and word choice. It may result in a criminal complaint not being issued by the prosecuting authority, thwarted investigation, or even an unfavorable jury verdict. A well-written report contains important details without needless paragraphs

and pages of unnecessary information. If a fire was the result of a criminal act, the report has to contain all the elements of the offense. The fire investigator has to balance between relevance and excessiveness.

There are no excuses for mistakes in grammar, capitalization, and spelling. There are word processing programs for personal computers equipped with a spelling and grammar check available. These are excellent tools for the investigator.

The investigation report completed by the fire investigator, is not only going to be reviewed by their supervisor, but usually is distributed to other investigators and copied for attorneys and insurance company representatives. A good report is written objectively, without any personal biases and unsubstantiated opinions and conclusions. Write your report at a level the average person can understand. If technical terms are used, be sure to elaborate on their meaning.

Every investigation report has to answer these six basic questions: Who; What; When; Where; Why; and How? Each investigation should answer these standard investigative questions. **WHO**... was the victim? ... made the report? ... discovered the crime? ... committed the crime? **WHAT**... was the crime? ... do the witnesses know? ... actions were taken? ... was done with the evidence? ... time was it reported? **WHEN**... was the crime committed? ... was the crime discovered? ... was the accused individual arrested? **WHERE**... was the crime committed? ... was the suspect seen? ... was the witnessers located? ... was the evidence collected? **WHY**... was the crime committed? **HOW**... was the crime committed? ... did the criminal leave the scene? ... was the crime discovered? ... did the investigator obtain the evidence?

Preliminary Report

The preliminary report is the face or cover sheet which contains the basic information about the incident. It is usually on a pre-printed form and completed after a few days after the incident. It is used as a guide for the investigator to further follow up on particular information. Since it is a preliminary report, certain information might change in the course of the investigation, such as suspect and motive information. The following is an example of a preliminary report and a sample of the required information:

PRELIMINARY REPORT

1.	CASE NUMBER	99-00898
2.	CODE SECTION	451b Penal Code
3.	CRIME/INCIDENT	Arson
4.	CLASSIFICATION	Structure
5.	COUNTY	El Dorado
6.	DATE, TIME, DAY	06/17/99, 0230 Hours
7.	LOCATION	1234 Oak View Place, Placerville
8.	VICTIM	John William Doe, Jr. 1234 Oak View Place Placerville, California DOB 09/02/48 Caucasian male adult Salesman 916/612-0965 H 415/902-0976 W
9.	AREA AND TYPE OF PROPERTY	Single family dwelling, located in a rural area
10.	ELEMENTS OF OFFENSE	The suspect poured gasoline in several locations inside the residence and ignited such with an open flame device, causing a fire to develop
11.	EXTENT OF DAMAGE	Major to total damage to the structure and contents
12.	REASON FOR OFFENSE	Still under investigation
13.	LOSS, INJURIES, AND DEATHS	$350,000, no injuries, no deaths
14.	WEATHER AND WIND	Clear skies, 5 to 7 M.P.H., SW wind
15.	FIRE INSURANCE POLICY	ABC Fire Insurance Co. James F. Winten, Agent 916/990-0545 Policy number WH/986-W2376 $400,000 structure, $200,000 contents
16.	DISTINCTIVE ACTIONS OF SUSPECT	Suspect used gasoline and a cigarette matchbook delay device
17.	SUSPECT INFORMATION	No suspects at this time
18.	REPORTING INVESTIGATOR	Fire Investigator Joseph Hall
19.	DATE	06/19/99
20.	FURTHER ACTION	Case open, follow up required

The preliminary investigation report can be routed to supervisors for review, sent to other fire department and law enforcement investigators working jointly on the case, and forwarded to the record unit for statistical information. As the investigation further develops, information may change. These changes will be reflected in the investigation report.

Narrative Report Format

The investigation report is typically done in a narrative format. One of the methods in writing the narrative report is to break it down into sections with headings. This allows the fire investigator to organize the report systematically.

When the investigator is taking notes at the fire scene, they can utilize these headings. This allows the investigator to conduct the investigation in an organized and thorough manner. The report should be written chronologically, from the time the investigator is notified, arrived at the scene, and concluded the investigation. By using headings, it gives anyone reading the report, a clear and logical course in which the investigation was completed. Finding particular sections, statement, and even details can be easy, once the corresponding heading is located. This can sure aid the prosecutor and you at the time of trial.

The narrative report normally begins with a SUMMARY section. A summary is a one or two sentence statement giving a brief synopsis of the incident. The date, time, location, property involved, and the result of your investigation is discussed.

After the summary section, the fire investigator states they became aware of the incident. This is designated as the NOTIFICATION section. It is here, where the fire investigator indicates how they were contacted by law enforcement or a fire service official or by the dispatch center. Next, the fire investigator reports when they arrived at the incident scene. In this section, the fire investigator recounts who they met, describes the security of the fire scene, who assisted in the scene investigation, and if a search warrant, inspection or administrative warrant had to be obtained, or had received written or verbal consent from the occupant. This can be under the heading of ON-SCENE INVESTIGATION.

Once the investigation conducts their perimeter scene examination, their findings should be recorded under the PERIMETER SEARCH section of the report. Under this section, the investigator reports any evidence found, such as footprints, tire prints, accelerant containers, and anything that might associate the arsonist to the scene, i.e., shoes, and clothing.

Following the perimeter search section is a segment on the type of structure and its building construction. Here the fire investigator describes the use of the building, construction methods, and material used. These include the framing, floors, exterior and interior walls, and their finishes. The electrical and gas utilities are addressed along with any type of an alarm system. This section is normally headed BUILDING CONSTRUCTION OF INVOLVED STRUCTURE.

The next section of the investigation narrative report discusses the exterior of the building and what affect the fire had on it. The investigator describes the condition of each of the exterior sides of the building. Normally it includes the east, south, west, and north sides of the structure. The heading EXTERIOR EXAMINATION OF THE INVOLVED STRUCTURE is utilized. The investigator can report their finding of the perimeter examination. If there were tire tracks, gas cans, or any other type of unusual item found, they should be reported here.

The interior examination of the structure is reported next. The fire investigator will describe the condition of the interior rooms and their contents. They will describe the fire and what affect it had on the interior building components and contents. This section has the heading INTERIOR EXAMINATION OF THE INVOLVED STRUCTURE. Each interior room or section may be described with its own subheading: living room, dining room, master bedroom, etc.

The succeeding section depicts the area and the point of fire origin. This may be a room, location within a room, or an object. The fire investigator will state where the fire originated and what caused the fire. If there is more than one area of fire origin, it will be noted here. This has a heading of AREA OF FIRE ORIGIN or even if possible, POINT OF FIRE ORIGIN. A part of this section will be the elimination of any accidental sources of fire ignition if the investigator has determined that the fire was caused by arson.

After reporting the area of fire origin, the investigator addresses evidence. This would include reporting on any photographs or video taken and itemizing any physical evidence collected. A log of each photograph taken and piece of evidence collected is detailed. The heading EVIDENCE usually has two sub-headings, one for the photograph log and the other for the evidence collection log. Each will describe the type, location, and disposition of each.

Following the evidence section, the fire investigator should list all interviews taken. When reporting the interviews, it is recommended that you list them chronologically. It is important that complete and accurate personal descriptors be obtained including full name, date of birth, home and work addresses and phone numbers, and some type of an identification number. The more information you can acquire on a person, the easier it is to find this person, two, three years later when you want them to testify in court. The heading INTERVIEWS or STATEMENTS can be utilized.

Just before the last section of the investigation narrative, the fire investigator should list all of the other documentation he has received. It has the heading of DOCUMENT INDEX. This would include the fire suppression report, any law enforcement agencies report on the incident, building officials reports, or any other public agency report on the incident. Insurance company documents are not always readily available. If they are, they can be listed here. If they are received later, after the investigation narrative report has been filed, they can be included in a supplemental report.

The last section of the investigation narrative report is the opinion and conclusion of the fire investigator. It has the heading of OPINION AND CONCLUSION. Here the investigator clearly states what caused the fire. The fire investigator will summarizes what was discovered at the fire scene, reports on how the fire originated, and states what supporting information that was acquired through interviews. Stated in this section, is any law violation. It is imperative that all the elements of the crime are included.

This format can be used for structure, vehicle, and wildland fire investigations. The fire investigator would have to modify the headings to suit the particular need. Once the investigation narrative has been completed, it should be forwarded for review. If there is new information obtained in the investigation after the investigation narrative is filed, the investigator should use a supplemental report. Each supplemental report is assigned a number, usually starting with 1, and is filled. In major investigations, it is not uncommon to have 10, 15, and even 20 supplemental reports.

The following is an example of a structure fire investigation narrative report. Presented are those sections of the report that establish the corpus delicti of arson.

NARRATIVE REPORT

ARSON INVESTIGATION: 8945 COLONY LANE IN LOOMIS CITY, CALIFORNIA

SUMMARY

On 06-26-99, at approximately 2045 hours, a fire burned the interior and exterior of the structure located at 8945 Colony Tree Lane in Loomis City. The occupant, Laura R. Dills was not at home at the time of the fire.

On 06-26-99 through 06-27-99, I conducted an on-scene fire investigation. After the on-scene fire investigation, I have determined the cause of the fire was deliberate act of arson.

NOTIFICATION

On 06-26-99, at approximately 2100 hours, I was in contact with Loomis City Fire Department Chief Tom Gilbert, address of P. O. Box 1656, Loomis City, phone number (296) 631-6838, in reference to a structure fire. Fire Chief Gilbert stated that his fire suppression units were at the scene of the structure fire located at 8945 Colony Tree Lane in Loomis City.

Chief Gilbert stated that the fire was reported at 2045 hours. A female person had been seen running from the structure immediately after the fire. Fire Chief Gilbert requested assistance for the investigation.

ON-SCENE FIRE INVESTIGATION

On 06-26-99, at approximately 2125 hours, I arrived at the fire scene. Fire crews were still extinguishing the fire in the structure. I made contact with Fire Chief Gilbert and Sun County Deputy Sheriff Nelson. While the fire suppression crews were still suppressing the fire, I had obtained written consent from the occupant, Laura R. Dills, to conduct the on-scene fire investigation. Security for the fire scene was conducted by members of the Loomis City Fire Department from the time of their arrival until the conclusion of the fire investigation on 06-27-99.

Statement of Deputy Nelson

Deputy Nelson stated that she responded to 8945 Colony Tree Lane to assist the fire department. She said once she arrived at the scene, she was told that an unknown female person had just left the scene. The unknown female had been badly burned. Deputy Nelson surveyed the area and found a pile of burned clothing located next to 9338 Pear Tree Lane. Besides the burned clothing, she had

found a pair of broken wire glasses, a burned green T-shirt, a burned purple jacket, and one burned green/blue colored plastic glove. Also found inside the burned clothing were two boxes of matches.

Statement of Laura R. Dills

On 06-26-99, at approximately 2147 hours, I interviewed Laura Ruby Dills, at the scene, while suppression crews were extinguishing fire. Dills has a date of birth of 01-18-53, a phone number of (296) 632-0113 (H) and (296) 633-9267 (W). She currently owns a business; Laura's Place, a bar and grill, located at 21157 Falls Blvd. in Loomis City.

Dills had become aware the fire when she drove up Colony Tree Lane at approximately 2110 hours. She saw the fire crews and trucks parked in front of her house extinguishing the fire. Dills lives in the house alone and is currently buying this house from her landlord, Gary Jones.

Dills is currently remodeling the house. She had just installed new floors, carpeting, and painted the entire interior of the structure. All of the appliances were in good working order. Recently, the local gas company repaired her stove. A new safety valve was installed.

Dills did not know what type of insurance coverage she or her landlord had. She believes the insurance is through Great Falls Farm Insurance. Dills had left the residence at approximately 1015 hours on 06-26-99. She had left her two dogs outside in the dog run.

PERIMETER SEARCH

On 06-26-99, I conducted a perimeter search of the fire scene. Found on the exterior of the structure were the following items:

Item #1 A red unburned woman's tennis shoe that had a strong odor of gasoline.
Item #2 The remains of burned clothing and a burned shoe.
Item #3 A burned and melted plastic green/blue colored glove. It was found near Items #1 and #2.

The above items were found in the northern perimeter of the property, approximately forty feet north from the exterior of the structure. They were collected on 06-26-99, at approximately 2330 hours.

BUILDING CONSTRUCTION OF INVOLVED STRUCTURE

Involved structure was located at the west side of Colony Tree Lane. It was approximately 66 feet from the street. Adjacent to the structure was a two bay, opened carport. It had been used as storage area for the occupant.

The single family, one story structure was built on concrete perimeter foundation. The wooden framed structure had approximately 1300 square feet of living area.

The exterior walls of the structure were wooden 2"x4" studs with wooden horizontal siding. The interior walls were wooden 2"x4" studs protected with drywall. The flat, rolled asphalt roof was supported with wooden roof rafters. The floor was constructed with wooden tongue and groove sub-flooring that was covered with wall-to-wall carpeting and linoleum.

The natural gas meter was located at the front, east exterior side of the structure. The fireplace, hot water heater, fireplace, and cooking stove utilized natural gas. The electrical meter was located above the gas meter.

EXTERIOR EXAMINATION OF THE FIRE SCENE

The roof of the structure had sustained major to total fire damage. Portions of the roof collapsed in the northwest corner. The sections of the roof over the kitchen and the living room were totally consumed by the fire.

North Exterior Side

The north exterior side of the structure had sustained major fire damage. The exterior door leading into the house was found on the ground, lying on its exterior side. The door had received major fire damage. The door had been opened at the time of the fire.

This side of the structure had sustained major fire damage along with the structural displacement. The lower portions of the wall were pushed and bowed in an outward direction. The fire had extended into the adjacent carport, trees, and bushes. The contents inside the carport had received moderate fire damage.

West Exterior Side

The rear or west exterior side of the structure had sustained moderate fire damage. The fire had broken out windows and involved the roof's overhang to burn.

South Exterior Side

The south exterior side of the structure sustained moderate fire damage. The fire damage was concentrated around the window opening. The hot water heater had received a moderate amount of fire damage.

East Exterior Side

The front or east exterior side of the structure had sustained major fire damage. The fire was concentrated around the front door and front picture window. The front door was found in the closed position at the time of the fire. The electrical meter and gas meter sustained moderate to major fire damage. County utility company tested the natural gas line throughout the structure. The gas line was intact after the fire.

INTERIOR EXAMINATION OF INVOLVED STRUCTURE

In the front interior of the house was a large open area in which the living room, kitchen, and dining room were located. Off a small hallway leading from the kitchen to the rear of the house, there were two bedrooms and one bath.

Living Room

The living room was furnished with a natural gas fireplace at the southeast corner, a sofa against the east wall, and a television set a table in the northeast corner. The front door and the picture window were located on the east wall.

All the contents in the living room had sustained major fire damage. The fire debris was approximately 8" deep. The gas fireplace was found off at the time of the fire. In examining the floor after the fire debris was removed, I found no signs of an accelerant being poured on the floor.

Kitchen

The kitchen was furnished with normal contents. The cooking range oven was a natural gas type. In examining it, I found the controls in the off position. The kitchen had sustained major fire damage. The fire damage was from the floor level to ceiling level. The wooden cabinets and their contents had received major fire damage. The shelving within the cabinets had burned and collapsed causing the contents to spill onto the counter and the floor. Once the fire debris was removed from the floor, I found burned remains of a red plastic gasoline can. It was in the upright position. The top and sides the can were burned and melted. The bottom and the lower portions of the side were intact. It had strong odor of gasoline. In the fire debris, I found the burned remains of a book of matches. The kitchen floor had a burn pattern associated with the burning of a liquid accelerant. A sample of the fire debris and the burned gasoline can was taken as evidence.

Hallway

The hallway led from the kitchen to the rear of the structure. It had received major fire damage. The fire debris was examined. An evidence sample of the fire debris was taken. The fire debris found in the hallway had an odor of gasoline.

Bathroom

The bathroom had sustained moderate fire damage. A sample of the fire debris was taken from the floor. The bathroom had strong odor of gasoline. The floor had a burn pattern associated with the burning of a liquid accelerant.

Northwest Bedroom

The northwest bedroom had sustained total fire damage. The contents in the room included a double bed against the north wall, a desk against the south wall, a love seat against the east wall, and a closet against the west wall. The room had normal furnishing and contents that included clothing and boxes of personal items. The north wall had sustained explosion damage at its lower portion. It was pushed in an outward direction. Samples of fire debris and carpet were taken from the floor. They had a strong odor of gasoline. A control sample of the carpeting was also taken as evidence.

Southwest Bedroom

The southwest bedroom was furnished with a double bed against the south wall, a dresser against the north wall, and a table against the west wall. The room and its contents had sustained moderate fire damage. There were normal furnishings in the room, which included personal items, clothing, and jewelry. The majority of the contents remained intact. The door to the bedroom was found in the closed position. Once the fire debris was removed, there were no signs of a fire cause.
Each room had a distinct, separate origin except the southwest bedroom. I examined each room to determine the cause of the fire. There were no accidental sources of ignition found in any of the rooms. This included examining appliances, duplex electrical outlets, and switches.

EVIDENCE

Photographs

A. Red tennis shoe, burned pants and red tennis shoe, and green plastic glove
B. East exterior of building
C. South exterior of the building

D. West exterior of the building
E. North exterior of the building
F. Lower section of north exterior wall
G. Interior view living room, kitchen, and dining room
H. Interior view hallway
I. Interior of bathroom
J. Interior of southwest bedroom
K. Interior view of northwest bedroom
L. Kitchen floor showing burn patterns and gasoline can
M. Hallway floor showing burn patterns and evidence sample
N. Bathroom floor showing burn patterns and evidence sample
O. Southwest bedroom after the removal of fire debris
P. Northwest bedroom showing burn patterns, fire debris, carpet, and control carpet sample.

Evidence Collected

Item 1 - An unburned red tennis shoe collected on 06-26-99, at 2330 hours.
Item 2 - A burned shoe and pants collected with Items 1 and 3.
Item 3 - A burned plastic green colored glove collected with Items 1 and 2.
Item 4 - The burned remains of a red plastic gas can collected from the kitchen on 06-27-99 at 1130 hours.
Item 5 - Fire debris sample collected in the hallway on 06-27-99 at 1405 hours.
Item 6 - Fire debris sample collected in bathroom on 06-27-99 at 1449 hours.
Item 7 - Fire debris and carpeting from the northwest bedroom collected on 06-27-99 at 1550 hours.
Item 8 - A control carpet sample from the northwest bedroom collected 06-27-99 at 1555 hours.

INTERVIEWS

Statement of Fire Captain Jeff Harris

On 06-26-99, I interviewed Loomis City Fire Captain Jeff Harris at the fire scene. Fire Captain Harris stated that fire suppression crews had a difficult time extinguishing the fire in the northwest section of the residence. Only after several attacks, the fire was suppressed. During the overhaul operation, he smelled gasoline in the northwest bedroom.

Statement of Duane Dunks

On 06-27-99, at 0930 hours, I interviewed Duane Jeffery Dunks, DOB of 04-07-58, at the fire scene. Dunks lives at 8940 Colony Tree Lane, across from the involved structure. He can be reached at

(296) 632-3542. Dunks is currently unemployed and has a state driver license number of VM-8600243.

Dunks was home at the time of the incident. He ran outside after hearing a large explosion. The explosion came from the house across the street. When he got to the street, he saw a woman on fire running towards him. The woman's hair, shoulders, and back were burning. He ran up to the woman and extinguished the flames on her.

The woman said there was someone else in the house. Dunks ran to the house. The front door was locked and the side door was standing opened. There was heavy involvement of flame and smoke coming from the inside the kitchen and northwest bedroom. He stayed outside the doorway and yelled. There was no response. Dunks ran back to the street. The woman was gone.

Statement of Peter Baker

On 06-27-99, at 1031 hours, I interviewed Peter Wayne Baker, DOB of 10-29-43, at the fire scene. Baker lives at 8939 Colony Tree Lane, which is just to the south of the involved structure. He can be reached at (296) 630-5275 (H) or (296) 442-0987 (W). Baker is a truck driver for A & D Concrete in Loomis City and has a state driver license number of AK-09361228.

Baker was outside of his house at the time of the explosion. He was standing in his driveway when he noticed one of Dills' dogs running towards him. The dogs are normally kept in the dog run. All of a sudden, he heard a WHOOSH noise and an explosion occurred. All of the windows on the south side blew out. Baker said the sound before the explosion was the same sound you hear when you ignite gasoline. He ran into his house and called 911. He ran up the street.
Baker met his neighbor Duane Dunks on the street. He saw a woman coming across the front yard of Dills' house towards him. Her hair, both sleeves, her back and her shoulders were on fire. He extinguished the flames and gave her his coat. She said something about someone still inside the house. He ran towards the house. He couldn't do anything. He looked back at the woman, and she was gone. His coat was lying on the ground.

DOCUMENT INDEX

1. Loomis City Fire Department incident report
2. Deputy Nelson, Sun County Sheriff's Department, case investigation report 99-02548

OPINION AND CONCLUSION

After conducting an on-scene fire investigation, I have concluded that the cause of the fire was a deliberate act of arson. Flammable liquid accelerant, gasoline, was intentionally poured throughout

the northwest bedroom, the bathroom, the hallway, and the kitchen. The open flame of a match ignited the gasoline. A burned gasoline container was found in the kitchen. The smell of unburned gasoline and the burn patterns on portions of the structure's floor confirm that this was not an accidental act.

The arson of an inhabited dwelling is a violation of Section 451b of the Penal Code.

REPORTING INVESTIGATOR

THOMAS J. JACKSON
Fire Investigator
07-05-99

CATEGORY CASE REPORT FORMAT

This particular report format is popular with fire investigators that file criminal cases because it outlines the case, describes the charges that apply, and lists the suspects within the first three sections of the report. This allows for a quick review by the Deputy District Attorney (DDA) when the case is submitted for filing. The Category Case Report is divided into ten (10) categories.

1-VIOLATIONS/POLICY (ACCUSATIONS)

This category lists the violations and or accusations that apply to the case. This category also gives a brief detailed description of the violations.

2-SUMMARY

Here the fire investigator gives a brief summary of the case, usually two or three paragraphs in length, detailing the pertinent facts and stating his/her opinion as to the cause of the fire. The summary needs to state the "what, when, where, who, why and how" of the case. The summary should contain the essence of the crime or the event. State all facts before writing any conclusions.

3-SUSPECT(S) or SUBJECT(S)

The investigator lists suspects and or subjects related to the case in this category. A complete description of each suspect is listed by full name with last name first. Also listed is the individual's race, sex, age, date of birth (DOB), Social Security number, drivers license number, height, weight, build, hair color, type and style.

4-VICTIM(S)/WITNESS(ES)

This category is for victims and witnesses. Each individual associated with the case will be identified as completely as possible and listed in this category. Each person is listed by full name with last name first. Also listed are the person's sex, age, date of birth (DOB), Social Security number, driver's license number, home address, telephone number, business address, and telephone number. Also included in this section is a brief description of what each witness will testify to.

5-EVIDENCE

All evidence collected during the investigation is listed and described in this category. If evidence or photographic logs were used, then they are listed as attachments and are included in category 10-ATTACHMENTS. Each attachment must have a number and that number is listed in this category referring to the document.

6-PHYSICAL CONDITION OR CONDITIONS

This category can be used to describe the conditions of victims, witnesses, and suspects or if appropriate, used to describe the physical conditions relating to your case, i.e., weather, vegetation conditions, fuel load, etc. You must be as objective as possible in your observations and detail what you observed. This can include drunkenness, belligerence, nervousness, or other observations you make. This would include physical conditions as well as state of mind, attitude, or demeanor.

7-VEHICLES OR EQUIPMENT

The investigator lists and fully describes all vehicles pertinent to the investigation in this category. This would include vehicles associated with witnesses and victims, not just suspects. When describing vehicles, be sure to include color, year, make, body style, and license plate number. An acronym used to help remember this critical information is CYMBL. Additional information that should be listed is the vehicle identification number (VIN), registered owner(s), and lien holder if known.

8-PROPERTY

In this category, the investigator lists all property that is pertinent to the case. This would include property that is lost, stolen, damaged, or destroyed. Each article involved shall be individually itemized and completely described, including serial numbers, when available.

9 NARRATIVE/INVESTIGATION

In this category, the investigator writes a complete narrative incorporating the details of the incident and the investigation. Included in the narrative is the WHO, WHAT, WHERE, WHEN, WHY and HOW of the case. Here the investigator describes all that is done on the case, everyone who is interviewed, results of any analysis performed and any opinions or conclusions the investigator reached during the investigation. The narrative is written from the first person singular standpoint.

10-ATTACHMENTS

Included in this category are all forms or logs associated with the case. Attachments would include photograph logs, evidence logs, statements, waiver forms, consent forms, sketches, photographs, property forms from search warrants, maps, diagrams, sketches, contracts, assessor/ownership information, insurance information, DMV, CII, NCIC and FBI information. List any attachments by number and number of pages per attachment.

This format can be used for structure, vehicle, and wildland fire investigations. The fire investigator would place the appropriate information in each category that pertains to their particular case. If there is

new information obtained in the investigation after the case report is filed, the investigator should use a supplemental report. Each supplemental report is assigned a number, usually starting with 1, and is placed in the 10-ATTACHMENTS category of the original case report.

The following is an example of the category case report format.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"1-VIOLATIONS"

1 - Section 451(d) Penal Code. Willfully and maliciously sets fire to or burns or causes to be burned, or who aids, counsels, or procures the burning of any structure, forestland, or property

2 - Section 548(a) Penal Code. Every person who willfully injures, destroys, secretes, abandons, or disposes of any property which at the time is insured against loss or damage by theft, or embezzlement, or any casualty with intent to defraud or prejudice the insurer, whether the property is the property or in the possession of such person or any other person.

3 - Section 182(1) Penal Code. If two or more people conspire to commit any crime.

4 - Section 182(4) Penal Code. To cheat and defraud any person of any property, by any means which are in themselves criminal, or to obtain money or property by false pretenses or by false promises with fraudulent intent not to perform such promises.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"2-SUMMARY"

On July 10, 1999, at approximately 2130 hours, John Smith (suspect) stole a 1982 Datsun Stanza belonging to Melissa Eickhoff from the Target department store parking lot in Huntington Beach. This theft was committed at the direction of Jim Brown (suspect), a private insurance adjuster. The stolen vehicle was towed to a private storage yard, DBA E-Z Tow, located at 1234 S. Main Street, Anaheim, CA. At that location a CD stereo player, speakers, and miscellaneous personal property was removed from the vehicle.

On July 12, 1999, John Smith towed the stolen vehicle to the Von's parking lot located at 5600 E. Santa Ana Canyon Road and utilizing three incendiary devices, maliciously with the intent to defraud, set the vehicle on fire. After Anaheim Fire Department Engine 21 extinguished the vehicle fire, John Smith self dispatched his tow truck to return the vehicle to his private storage yard. Robert McClellan witnessed John Smith driving the unburned vehicle on his tow truck toward the Von's Market prior to the occurrence of the fire. Shortly thereafter, Mr. McClellan observed the same vehicle on fire and placed a "911" call to the fire department. Following the extinguishment of the fire and while returning home, Mr. McClellan again observed John Smith towing the vehicle in the opposite direction.

On July 13, 1999, Jim Brown (suspect) telephonically contacted the vehicle owner and offered to serve as her claim adjuster, promising her an excellent value on her claim.

On July 14, 1999, while interviewing John Smith, he admitted being involved in this crime at the direction of Jim Brown, including stealing the vehicle, setting the vehicle on fire, and storing the vehicle at his yard while Jim Brown arranged to serve as the claims adjuster for the vehicle owner.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"3-SUSPECTS"

S-1 **SMITH**, John David: White male 38 years of age, born on March 3, 1961. Height - five feet, eight inches. Weight – 185 pounds, medium to heavy build. His hair is dark brown in color with a close cut length on the sides. His eyes are hazel and his complexion is fair. He has a goatee style beard with streaks of gray running through it. He has multiple tattoos. A "dragon" on his right forearm, a "leopard" on his left forearm and a "barbed wire" design around his right wrist.

Home address:
182 Maple Drive
Anaheim, California 92805
714-555-9526

Business address:
1234 S. Main Street
Anaheim, California 92805
714-555-5511

Driver's license:
California Q1234567

Social security number:
123-45-6789

S-2 **BROWN**, Jim Jacob: White male 33 years of age, born on May 5, 1966. Height - five feet, two inches. Weight - 250 pounds, heavy build. His hair is dark brown in color and medium length. His eyes are green and his complexion is fair to "pasty." He has no facial hair. He has multiple tattoos. A "spider web" on his left elbow and a teardrop under the corner of his left eye. His right, earlobe was pierced.

Home address:
6789 Ash Street
Anaheim, California 92805
714-555-7527

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

Business address:
In It 4U Adjusters
5432 First Street
714-555-6912

Driver's license:
California T9876543

Social security number:
344-34-6341

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"4-VICTIM and WITNESSES"

NAME

V-1: STATE FARM INSURANCE CO.
AGENT: Bill Jackson
1294 Grand Avenue
Los Angeles, CA 90012
(213) 555-8979 Ext. 132

Jackson confirms that the vehicle was insured in amount of $7,000 for fire and theft.

V-2: EICKHOFF, Melissa
White female, Caucasian, 29 y/o
DOB 08/01/69
1284 West Street
Huntington Beach, CA 90351

Eickhoff states that the vehicle was stolen on July 10, 1999 and was insured for $7,000. A private adjuster, Jim Brown (suspect), telephonically contacted her and volunteered to handle her claim.

W-1: BERG, Scott
White male, Caucasian, 34 y/o
DOB 08/29/64
3245 Apple Lane Drive
Anaheim, CA 92805

Fire Captain at scene. Observed fire behavior. States that vehicle owner was not at scene.

W-2: McCLELLAN, Robert
White male, Caucasian, 31 y/o
DOB 02/04/68
7200 E. Santa Ana Canyon Road
Anaheim, CA 92807

Observed John Smith (suspect) driving tow truck with unburned vehicle prior to fire. Observed fire and contacted fire department. Saw Smith leave scene towing burnt vehicle

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"5-EVIDENCE"

EVIDENCE AND PHOTOGRAPHIC REPORT CASE #:

PHOTOGRAPHS BY: STEFFEN DATE: 7/13/99

EVIDENCE COLLECTED BY BARBER DATE: 7/13/99

INVESTIGATING OFFICER: BARBER

CODE SECTION PC 451 | CRIME ARSON | CLASSIFICATION FELONY

VICTIM'S NAME (LAST, FIRST, MIDDLE) FIRM, IF BUSINESS: McCLELLAN, ROBERT | ADDRESS ☒ RESIDENCE ☐ BUSINESS: 235 LEANDRO, ANAHEIM | PHONE: (714) 555-5555

PHOTOGRAPHS (ALPHABETICAL) A TO K
EVIDENCE (NUMERICAL) 1 TO 5

E	P		DISPOSITION
1		Matchbook device "Ralphs" w/cig	Evidence lockup
2		" " " "	" "
3		Unknown type object, possible firework device	" "
4		Food wrapper "Del Taco"	" "
5		Parking ticket envelope / green	" "
	A	Front of vehicle	Case file
	B	Rear of vehicle	" "
	C	(L) side of vehicle	" "
	D	(R) side of vehicle	" "
	E	Engine compartment V.I.N.	" "
	F	Interior dash	" "
	G	Cig/match device behind driver's seat	" "
	H	Cig/match device	" "
	I	Green parking ticket envelope	" "
	J	Unknown type firework device	" "
	K	Food wrapper "Del Taco"	" "

REPORTING OFFICERS	RECORDING OFFICER	TYPED BY	DATE/TIME	ROUTED BY
Barber/Steffen	Barber	Barber	7/14/99	

FURTHER ACTION: ☒ YES ☐ NO

COPIES TO:
☐ DETECTIVE ☐ CII
☐ JUVENILE ☐ PATROL
☐ DIST. ATTY ☐ FIRE DEPT
☐ S.O./P.D. ☐ OTHER_____

REVIEWED BY: DATE:

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"6-CONDITIONS"

"N/A"

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"7-VEHICLES"

The suspect's vehicle is:

Color	-	White with orange lettering "E-Z Tow"
Year	-	1996
Make	-	Ford
Body Style	-	Commercial tow truck
Lic#	-	CA / X010101

The vehicle is owned by the suspect's employer, E-Z Tow, and was observed by W-2 McClellan towing the subject vehicle before the fire (unburned) and after the fire (burned). The driver of the tow truck was S-1 Smith.

The subject vehicle is:

Color	-	Metallic blue
Year	-	1982
Make	-	Nissan/Datsun "Stanza"
Body Style	-	Four door, compact sedan
Lic#	-	Missing plates
VIN	-	JDRT235DFC462234F

The vehicle is owned by the victim Melissa L. Eickhoff and was seen by W-2 McClellan being towed before and after the fire. The vehicle was stolen on 7/10/99 from the Target department store parking lot in Huntington Beach between 2100 hours and 2200 hours after V-1 had driven it there to go shopping.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"8-PROPERTY"

STOLEN FROM VEHICLE
Owner: Melissa Eickhoff

CD Stereo Player
Value: $325
Model: Sony

Stereo Speakers
Value: $125
Model: Infinity

Miscellaneous personal property
Beach towels
Beach chair
CDs

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"9-NARRATIVE"

On 7/13/99 at 0800 hours my partner I/0 Bruce R. Barber and I (I/0 Paul A Steffen) were assigned to investigate a vehicle fire that occurred at 5600 E. Santa Ana Canyon Road on 7/12/99 at 2005 hours, incident #99-1287. The vehicle had been towed from the scene and was located at a tow yard, DBA E-Z Tow, 1234 S. Main Street in the City of Anaheim.

I drove to the tow yard with my partner and arrived there at 0930 hours. The vehicle was located at the rear of the property between several other vehicles. The subject vehicle is a 1982 Nissan/ Datsun Stanza four-door compact sedan, metallic blue in color.

My initial examination of the scene revealed that a fire had occurred inside the passenger compartment of the subject vehicle. A closer examination of the physical evidence and burn patterns revealed a point of origin located on the front passenger seat. The seat cushion and the back of the seat were heavily damaged by fire. There was a hole completely burned through the back of the seat. The fire spread from this point vertically and horizontally throughout the interior of the vehicle causing extensive heat and smoke damage. The upholstery was melted and charred. The roof headliner was flaking, charred, and had dropped down onto the floor and the seats. The ignition switch was intact. I did not see a key. The radio/stereo was missing and the door speakers were gone. The glove box was open and empty. I found a green business letter size envelope on the floor in front of the passenger's seat. The words "Parking Ticket" were printed on the front of the envelope. Under the back seat next to the right rear door, I found a "Del Taco" food wrapper. The windows were heavily sooted and the front windshield was cracked from the heat. Damage to the exterior of the vehicle was relatively little. I saw some minor body damage to the exterior of the vehicle.

I saw three incendiary devices inside the vehicle. Two of the devices consisted of "Ralph's" brand paper matchbooks with unknown generic brand cigarettes inserted into and against the base of the matches with the cover folded over and closed. I found one of the matchbook devices on the rear floor behind the driver's seat. I found the other matchbook device underneath the front passenger's seat next to the door rocker panel. The third incendiary device was found on the floor in front of the front passenger's seat next to the gearshift knob. This device consisted of multiple cardboard tubes wrapped in thick paper. There were pieces of a faded red, white and blue label on the device with the words "Safe and Sane" printed on it.

The engine compartment and the trunk were undamaged by fire. The engine had parts removed from it and placed in the trunk. The front grill was missing. The rear taillights were missing and both front and

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

rear license plates were gone. The gas cap was in place and intact. The tires were undamaged and in relatively good condition.

Based on the physical evidence and the burn patterns my partner and I formed the opinion that this fire was incendiary in origin. The fireworks device was placed on the front seat and ignited with an open flame. Further that at least two incendiary matchbook devices were placed inside the vehicle and used as an improvised timer.

I photographed the fire scene and my partner (I/0 Barber) recovered the evidence and marked it with his signature and the date and incident number. See Attachment B.

The vehicle fire scene investigation at this location was completed at 1115 hours.

My partner and I drove to the location of the actual fire located at 5600 E. Santa Ana Canyon Rd. and arrived there at approximately 1230 hours. The vehicle burned behind a "Von's" supermarket. The area is relatively concealed from the public and is used for large trucks to access the loading dock area of the market. There are large dumpsters in the area. The neighborhood consists mostly of residential single-family homes. No one in the area at the time we were there could remember the fire or provide us with any additional information. We photographed the area and left.

We drove to 1284 West Street, Huntington Beach, and arrived there at approximately 1345 hours. We interviewed the vehicle owner, Melissa Eickhoff. She is the registered owner of the vehicle and she told us that it had been stolen from the Target department store parking lot in Huntington Beach on 7/10/99 at approximately 2200 hours. She said that the first time she learned of the fire was the morning of 7/13/99 when she was contacted by the suspect, Jim Brown, by telephone. She has never met Brown in person. She does not know what he looks like and would not be able to recognize him even if she saw his picture. See Attachment C.

At approximately 1530 hours, we booked our evidence into Technical Services for analysis.

At approximately 1945 hours, we drove to 7200 E. Santa Ana Canyon Road, Anaheim, to interview the witness Robert McClellan. McClellan told us that he reported the fire to the fire department. He also told us that he observed the subject vehicle being towed to the location prior to the fire unburned and being towed from the location after the fire burned by the same towing company and driver.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

On 7/14/99, we drove to Anaheim Fire Station 1 and arrived there at 0915 hours. We interviewed Captain Berg. Berg told us that he was the first fire department officer to arrive at the scene of the fire. He said the vehicle was well involved with fire. He said that there were no witnesses or suspects at the scene. He notified the police department and left the scene. See Attachment C.

We drove to E-Z Tow and arrived there at approximately 1030 hours. We interviewed John Smith. He told us he was dispatched to the location of the fire to recover the vehicle and tow it to the yard. He said it was the first time he had ever seen the vehicle and he did not know who the owner was. See Attachment C.

We drove to 5432 First Street, Anaheim, and arrived there at 1215 hours and interviewed Jim Brown. Brown told us that he is a part time private insurance adjuster and that he heard the fire over his scanner at home. He went to the fire scene and talked to the owner Melissa Eickhoff. He could not describe her to us. See Attachment C.

We drove to the Anaheim Medical Center, 1111 W. Las Palm Avenue, Anaheim, and talked to Robert McClellan. We showed him a photo line-up containing Smith. McClellan positively identified Smith as the person he saw towing the subject vehicle to and from the rear of the "Von's" parking lot before and after it was burned.

At approximately 1600 hours, we reinterviewed Smith and confronted him with his contradictory statements. Smith told us that he was hired by Brown to steal and burn vehicles for $100 each. He said that Brown told him to steal the subject vehicle and burn it. Smith said that he used a fireworks device to start the fire in the subject vehicle. He also stated that he used two paper matchbook devices as well. He used "Ralph's" brand matches. See Attachment C.

We placed Smith under arrest for arson.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

At 1700 hours, we reinterviewed Brown. Brown told us that if we were trying to implicate him in a crime then he wanted to speak with his attorney. We terminated the interview.

This case will be presented to the District Attorney's office for review and follow-up investigation as necessary. We will obtain an arrest warrant for Brown.

Paul M. Steffen
Captain I
Los Angeles City Fire Department
Arson Investigation Unit

Bruce Barber
Battalion Chief
Los Angeles City Fire Department
Arson Investigation Section

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

"10-ATTACHMENTS"

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SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

ATTACHMENT A

Investigation Activity Log

7/13/99

0900 - Picked up report of preliminary fire investigation at Anaheim Fire Station 3.
0930 - Arrived at E-Z Tow at 1234 S. Main Street to inspect vehicle fire.
1115 - Completed vehicle investigation and cleared scene.
1115 - 1215 Lunch
1230 - Arrived at fire scene at 5600 E. Santa Ana Canyon Road. Observed fire scene at rear of Von's Market.
1245 - Cleared scene.
1345 - Arrived at 1284 West Street to interview Melissa Eickhoff, registered owner of the vehicle.
1430 - Interview complete, cleared scene.
1500 - Arrived at Technical Services to submit evidence from fire scene for analysis.
1730 - Cleared Technical Services.
1730 - 1900 Dinner
1900 - Left for Anaheim Fire Station 2.
1945 - Interviewed Bob McClellan, person reporting vehicle fire.
2030 - Cleared Fire Station 2.

07/14/99

0800 - Left office for interview.
0915 - Arrived at Anaheim Fire Station 1 to interview Fire Captain Scott Berg, fire officer that completed fire report and handled vehicle fire.
1015 - Cleared interview scene.
1030 - Arrived at E-Z Tow to interview John Smith, tow truck driver.
1115 - Cleared interview scene, and left for Technical Services.
1130 - Arrived at Technical Services for background checks on suspects.
1200 - Cleared Technical Services, and left for In It 4U Adjusters to interview Jim Brown, insurance adjuster.
1215 - Arrived at In It 4U Adjusters.
1330 - Cleared interview at In It 4U Adjusters.
1445 - Met with P.R. Bob McClellan for review of photo lineup.
1500 - To Technical Services for lab results and lunch.
1600 - To E-Z Tow to interview John Smith.
1645 - Cleared E-Z Tow for In It 4U Adjusters.
1700 - Arrived at In It 4U Adjusters to interview and arrest Jim Brown.

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ATTACHMENT C

INTERVIEW OF:	Scott Berg	DOB:	08/09/64
ADDRESS:	3245 Apple Lane Drive		
CITY:	Anaheim	PHONE:	(714) 555-0745
DATE:	July 14,1999	TIME:	0915 hours
TAKEN AT:	500 E. Broadway, Anaheim, CA		

My partner, I/0 Paul Steffen, and I, I/0 Bruce Barber interviewed Fire Captain Scott Berg at Fire Station 1, his place of employment. Captain Berg was the Fire Captain in charge of Anaheim Fire Department Engine 21 and responded to a vehicle fire at the Von's Market. Captain Berg told us that while on a move-up, his Engine was dispatched to a reported car fire in the rear of Von's Market located at 5600 E. Santa Ana Canyon Drive. Upon arrival, he found a 1982 Datsun with the passenger compartment fully involved. Engine 21 fire fighters extinguished the fire and Captain Berg completed the normal fire report.

Captain Berg states that he did not observe or contact the vehicle owner. An Anaheim Police Department sector car requested a tow truck after the extinguishment and overhaul. Captain Berg did not observe any incendiary devices nor did he attempt to determine the cause of the fire. It was his observation that the fire seemed to be more accelerated than usual.

Captain Berg stated that he had Anaheim police place an impound on the car and secure it for the investigators. Captain Berg said he left the scene prior to the arrival of the tow truck.

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ATTACHMENT D

INTERVIEW OF:	Robert McClellan	DOB:	08/17/68
ADDRESS:	7200 E. Santa Ana Canyon Road		
CITY:	Anaheim	PHONE:	(714) 555-9782
DATE:	July 13,1999	TIME:	2000 hours
TAKEN AT:	1111 W. Las Palma Avenue, Anaheim, CA		

My partner, I/0 Paul Steffen, and I, I/0 Bruce Barber interviewed Robert McClellan at his place of employment. Mr. McClellan discovered a vehicle fire and reported it to the fire department. Mr. McClellan told us that on the evening of July 12, 1999, at approximately 2000 hours he was walking to the Von's market near his place of residence. Prior to arriving at the market, he witnessed a tow truck from E-Z Tow hauling a 1982 Datsun in a westbound direction. This vehicle was in an unburned condition. He described the driver as a white male, approximately 30 years old, 5'10", about 200 pounds with a goatee and brown hair.

After entering the market, he exited and observed a column of smoke from behind the market. He observed the same Datsun vehicle with a passenger compartment fire. He was surprised at the intensity of the fire. He called the fire department and witnessed the extinguishment of the fire. He does not recall seeing the tow truck driver at the fire scene.

While walking back home, he informed us that he once again observed the same tow truck driver in the same tow vehicle traveling in an eastbound direction towing the same Datsun vehicle that had been on fire. Mr. McClellan felt confident that he could easily identify the tow truck driver if he saw this person again.

Reinterview: July 14, 1999

On July 14, 1999, at Mr. McClellan's place of employment, we showed him a photo lineup of six white males. Included in this lineup was a photograph of John Smith (suspect). Mr. McClellan was given the proper admonishment and then positively identified John Smith as the tow truck driver that he had observed driving the vehicle prior to the fire.

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BROWN, JIM

ATTACHMENT E

INTERVIEW OF:	Melissa Eickhoff	DOB:	08/01/69
ADDRESS:	21741 Bushard Street		
CITY:	Huntington Beach	PHONE:	(714) 555-9526
DATE:	July 13,1999	TIME:	1345 hours
TAKEN AT:	1284 West Street, Huntington Beach, CA		

My partner, I/0 Paul Steffen, and I, I/0 Bruce Barber interviewed Melissa Eickhoff at her place of employment. Ms. Eickhoff was the victim of a stolen vehicle that was found on fire in the City of Anaheim. Ms. Eickhoff told us that on Monday, July 10, 1999, while shopping at the Target department store in Huntington Beach her 1982 Datsun was stolen. Ms. Eickhoff had entered the store at approximately 2100 hours and discovered the vehicle missing at 2200 hours. This was reported to the HBPD and a report was taken.

Ms. Eickhoff informed us that she had recently experienced mechanical problems with the car and had spent approximately $1,000 in repairs within the last two weeks. She was unsure if the vehicle was unlocked and explained that only two sets of keys existed.

Ms. Eickhoff stated that her vehicle was insured for $7,000 with State Farm Insurance Company and that the premium of $400 was due within days. Ms. Eickhoff has owned the vehicle for 2 years and does not owe money on it.

Ms. Eickhoff informed us that on the morning of July 13, 1999, a private insurance adjuster named Jim Brown contacted her. Mr. Brown told her that he could get her an excellent deal on her claim if he handled it. Ms. Eickhoff agreed to this arrangement.

Ms. Eickhoff states that inside of her vehicle was a Sony CD player with Infinity speakers. In the trunk was miscellaneous beach stuff including towel, chair, and some CDs.

Ms. Eickhoff states that her current employment was only temporary.

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BROWN, JIM

ATTACHMENT F

INTERVIEW OF:	John Smith	DOB:	03/03/61
ADDRESS:	182 Maple Drive		
CITY:	Anaheim	PHONE:	(714) 555-9526
DATE:	July 14,1999	TIME:	1030 hours
TAKEN AT:	1234 S. Main Street, Anaheim, CA		

My partner, I/0 Paul Steffen, and I, I/0 Bruce Barber interviewed John Smith (suspect) at his place of employment. Mr. Smith owns and operates E-Z Tow. Mr. Smith was questioned on the manner in which he was dispatched to the vehicle fire in the Von's Market. He told us that he was on his way home and heard the call go out on the radio. He contacted the dispatch and volunteered to take the assignment. Mr. Smith told us that when he arrived, the fire department and police department were still on scene. He told us that he hooked up the burned vehicle and towed it to the storage yard. He states that he has had no contact with the owner and no one has attempted to recover the vehicle. He did notice that some of the equipment on the vehicle was missing at the time he picked it up.

Mr. Smith denies knowing the registered owner, Ms. Eickhoff. Mr. Smith denies ever seeing or possessing the vehicle prior to the dispatch call. Mr. Smith denies having knowledge of the origin of the fire.

When questioned about a Mr. Jim Brown, Mr. Smith stated that back in 1985, he did meet Mr. Brown and that Mr. Brown assisted him with an insurance claim while serving as his adjuster. Mr. Smith states that he has not seen or talked to Mr. Brown for over 6 months.

At the end of this interview, Mr. Smith consented to having his photograph taken and that a review of his dispatch records were available.

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BROWN, JIM

Reinterview on July 14, 1999

At 1600 hours, my partner and I returned to Mr. Smith place of employment to conduct a reinterview. Mr. Smith was informed of his past criminal record and of his conflicting statements from his prior interview. Mr. Smith stated that he does some work with Mr. Brown on occasion. Mr. Smith was confronted with positive photo lineup by an eyewitness placing him at the scene of the fire prior to ignition. Mr. Smith requested a deal be made with the District Attorney. This request was denied.

Mi. Smith then stated that he was hired by Mr. Jim Brown to steal automobiles and set them on fire. Mr. Smith states that he is paid $100 for this arrangement.

Mr. Smith was placed under arrest.

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BROWN, JIM

ATTACHMENT G

INTERVIEW OF:	Jim Brown	DOB:	05/05/66
ADDRESS:	6789 Ash Street		
CITY:	Anaheim	PHONE:	(714) 555-7527
DATE:	July 14,1999	TIME:	1215 hours
TAKEN AT:	5432 First Street, Anaheim, CA		

My partner, I/0 Paul Steffen and I, I/0 Bruce Barber interviewed Jim Brown (suspect) at his place of employment. Mr. Brown is employed as a private insurance adjuster. Mr. Brown was questioned as to how he became aware of the vehicle fire. He stated that he was listening to the fire scanner and heard the dispatch call go out. He told us that when he got on scene he met the owner of the vehicle and offered to serve as her insurance adjuster. When questioned as to the description of the vehicle owner, he was unable to give an accurate description.

Mr. Brown told us that he gave the vehicle a quick inspection and estimated that he could recover approximately $6,000 for the insured owner.

He stated that he was on scene when the tow truck driver arrived and recognized him as a person he knew from before and felt sorry for him. He thought that the driver had been involved in insurance fraud in the past. Mr. Brown states that he likes to provide business to him on occasion.

Mr. Brown denies that he has had any further contact with the vehicle owner. Mr. Brown denies having any prior contact with the vehicle owner. Mr. Brown denies having any involvement in the burning of the vehicle.

Mr. Brown could not provide us with any documentation of having filed claims to insurance companies.

At the end of the interview, Mr. Brown consented to a photograph being taken of him.

SMITH, JOHN **07/12/99** **#99-1287**
BROWN, JIM

Reinterview on July 14, 1999

At 1700 hours, my partner and I returned to Mr. Brown place of employment after Mr. Smith described the arrangement that Mr. Brown and he had regarding the stealing and burning of vehicles.

Mr. Brown was questioned as to his method of determining which vehicle he would have Mr. Smith steal. Mr. Brown denied any involvement in this type of activity.

Mr. Brown requested contact with his lawyer and the interview was terminated.

UNIT 7: INFORMATION RESOURCES

INSURANCE INFORMATION FOR THE FIRE INVESTIGATOR

INSURANCE COMPANY RECORDS

Once a cause and origin investigation is complete, the initial paper chase should begin with the submittal of a letter to the insurance company requesting all documents from their files relevant to the investigation of this claim. Insurance Code §1875 requires the insurance company to provide all relevant information from their files to any governmental agency conducting an investigation into suspected arson fire.

The identity of the insurance company may be revealed to the investigator by the owner of the property. It may also be learned from the bank holding the mortgage on the property, or from the escrow or title company that handled the purchase of the property. Even if the fire investigator cannot immediately find out what insurance company issued the policy, a company fire investigator will certainly contact local fire or law enforcement authorities for a copy of the fire or police report if any claim is filed on the policy. These files should be flagged in both agencies so that all inquiries can be referred to the investigator on the case.

Claims File

In requesting such information from an insurance company, it is important that the investigator specifically ask for the entire claims file of the company. Generally, the claims file will contain the notice of loss, proof of loss, loss inventory, the insured examination under oath, adjuster's notes, adjuster's reports, adjuster's correspondence, fire investigator's report and may contain information on claims previously filed by the insured.

The initial notice of loss will be a telephone call from the insured or his agent to the insurance company. Once an investigator is aware of the individual who received the initial notice from the insured, he or she must be interviewed to determine whether anything unusual was said or done by the insured when reporting the fire to his or her insurance carrier. It will also be important for the investigator to determine the exact date and time the report of loss occurred.

The proof of loss will include a general declaration, signed by the insured, setting forth the amount of loss. This one-page document will include a statement by the insured setting forth the peril that caused the loss, the total amount of structural damage, the total amount of the personal property loss and the total amount claimed under the policy after the subtraction of the deductible. The insured is required to make each of these declarations under the penalty of perjury.

The proof of loss may also be accompanied by an itemization of the personal property lost due to the fire. If this list is not provided with the initial proof of loss, it will generally be filed with an amended proof of loss later in the claims process. Once this itemization is received, it should be examined to determine whether any motivation for the fire could be seen in the items claimed to have been lost in the fire. In examining this document, the investigator should look to see whether the claimed losses involve old or unsellable merchandise, inventory or fixtures; whether there is a claim filed by multiple mortgagees; whether the loss involved large amount of cash or other untraceable items; whether the items lost were incompatible with the residence, income, occupation or lifestyle of the individual, or inconsistent with the nature of the business being conducted at the location; whether the items claimed were all of premium quality and only sold in the high end of the market; or whether the loss involves many recent purchases of high value. If any of the above listed factors appear in the itemization of loss, the investigator will need to locate the supplier of the item to determine whether the true and accurate value was claimed and whether the item was, in fact, purchased.

Finally, the itemization of loss should be examined to determine whether the loss included items of sentimental value. If the premise destroyed is a location where an individual would likely keep items of sentimental value and no such items were listed in the itemization, there is a strong presumption that the insured was responsible for the fire and removed the items of sentimental value prior to the fire.

An itemization of loss will always include items that can be determined to be at the location during the initial cause and origin investigation. A thorough initial examination and a subsequent examination of the photographs will allow the investigator to easily determine whether there are any improprieties in the itemization.

One of the most important items that will be obtained pursuant to the Insurance Code §1875 letter is a copy of any Examination Under Oath of the insured or other individuals. These statements will generally contain a great deal of information on the insured. The examination will provide the investigator with preliminary information about the insured's financial status. The statement will generally involve the identification and authentication of tax returns and other financial documents, and will cover the accuracy of the items listed on the itemization of loss. The questioning in the statement will include detailed questions on the purchase and value of the claimed items. After a review of the examination, an investigator will have a substantial understanding of the insured's financial condition and the identification of many sources of additional information on the insured's financial condition and the items claimed to be lost in the fire.

The claims file will also contain a chronological listing of all the activities on the claim by the adjusters and other employees of the insurance company. The adjuster's activities will generally include an examination of the fire scene (sometimes with photographs), and will involve numerous correspondence from the insured as well as other individuals with information about the claim. There will be a great deal of first-hand information about both the insured and the claim. In addition, the

adjuster will be the main point of contact between the insurance company and any experts that are retained to conduct an investigation into the claim.

The insurance company will generally retain a private fire investigator to conduct an independent investigation of the fire scene. If a private investigator is retained, the investigation and report will assist in evaluating the direction and scope of any subsequent investigation. Since the private investigator generally is not on the scene until several days after the fire, the investigation, if compatible with the initial investigation, will help to bolster the credibility of the initial investigation. In addition, the private investigator may have discussed relevant issues with the insured or other witnesses who were either unavailable or would not speak with a law enforcement investigator. Finally, the report may aid the investigator in further evaluating the strengths and weaknesses of the initial investigation.

The claims file may also provide information on previous claims filed by the entity claiming the loss. These prior losses should be examined to determine whether there is a history of frequent losses, losses involving extraordinarily similar items, or losses involving extraordinarily similar circumstances. If any of these circumstances exists, it is apparent that the investigator should begin to focus the investigation on the reasons for the peculiarly similar circumstances and/or losses in the unrelated claims.

Underwriting File

One of the most under-utilized sources of information is the underwriting file of the insurance company. The §1875 letter should specifically request a copy of the entire underwriting file, it will generally not be provided by the insurance company. The underwriting file contains a wealth of information on the insured that can provide substantial evidence to prove or disprove a financial motive for the fire.

The underwriting file will include a copy of the insurance application. The application will give the investigator the basic information on the insured and information on the agent who issued the policy for the company. The application will require the insured to disclose prior claims and prior insurance companies.

The underwriting file will also include the insurance policy and the endorsements to the policy. The policy and endorsements will provide the investigator with an understanding of the nature of the policy and whether there are any special terms and conditions that might provide or negate the motive for the fire. In addition, the underwriting file will contain endorsements that increase or decrease the amount of the policy, or change the terms and conditions of the insurance coverage. It is evident that recent changes in the policy may provide direction to the investigator about the potential motive for the fire.

One item that an investigator should always examine in the policy is whether the policy involves co-insurance. If the policy involves co-insurance, the property is only insured for a portion of its value---generally 85-90%---with the owner bearing the financial burden for the uninsured portion of the loss.

The existence of a co-insurance provision may negate a financial motive for the fire, since the insured would bear the cost of replacing 10-15% of the loss total. Obviously, the insured's ability to only recoup 85% of a loss may negate a motive to destroy all the property. Nevertheless, the existence of a co-insurance on the policy may also result in over-valuation of the property, or the removal and secretion of a portion of the inventory, to avoid any loss under the co-insurance provisions of the policy. While the existence of a co-insurance provision in a policy does not eliminate the insured as a suspect in a fire, it certainly will require the investigator to conduct a substantial financial investigation to successfully prosecute the insured.

In addition, the underwriting file will also contain any notices of non-renewal or cancellation. The existence of a recent notice of cancellation or non-renewal in the insured's underwriting file should "red flag" the fire as likely to be a financially motivated fire. The investigator should interview the insurance company employee responsible for the policy and determine the grounds for the non-renewal or cancellation, and then determine whether such conditions would have increased the likelihood that the premises would suffer a loss prior to the completion of the policy term.

Finally, the policy endorsement and provisions should be examined to compare the date of the fire with the date when the policy was issued; the amount of the premium; the due date of the next premium payment; and any other changes to the policy that occurred in close proximity to the date of the fire. If the loss occurs shortly after the policy was issued, especially if not all of a substantial premium has been paid, or shortly before a substantial renewal premium is due to be paid, the insured's financial ability to make such premiums should be closely examined. In addition, any recent increases in the amount of the policy, especially in the absence of any obvious signs that the business has changed for the better, should be closely examined to ferret out any fraudulent fires. It should be determined whether the contents covered---and lost---involved seasonal goods destroyed at or near the end of the selling season. It is evident that an insured who is engaged in the manufacture or sales of seasonal goods may have a substantial motive to destroy his or her inventory at the conclusion of the season for its sale. This is especially so if the insured cannot sell the inventory, in the absence of substantial discounts, until the next year's season and the inventory is mortgaged or liened heavily.

The underwriting file may also contain the results of a site visit by an underwriter prior to the issuance of the policy. This report may include information on the nature of the business, the design of the structure and the layout of the contents and fixtures within the business. The site visit may also involve detailed measurements of the location and an examination of the security, sprinkler, and other safety related improvements at the location. Much of this information may come from the insured and can be used by the investigator to negate claims of lack of knowledge by the insured as to the operation of such systems.

An additional §1875 letter should also be sent to the insured's agent to obtain a copy of the agent's file on the insured. The agent's file may contain significant information on the insured, such as previous

insurance and claims. Furthermore, the agent should be interviewed to determine any additional knowledge that they may have about the insured and their business. The agent may very well have detailed knowledge about the insured and why any changes in the policy or endorsements occurred.

GLOSSARY OF INSURANCE TERMINOLOGY

Actual Cash Value (ACV): Current Replacement Cost less depreciation. However, in some states the law states that Actual Cash Value is the same as Fair Market Value.

Appraisal: The procedure used to settle a dispute between the insured and the company over the amount of the loss.

Business Interruption (BI): The profit lost by the insured due to the closing of the business because of a covered loss.

Chattel Mortgage: A mortgage on personal property.

Claimant: An individual who presents a claim to an insurance company. A claimant can be an insured or a third party claimant.

Coverage: Refers to liability of the policy and the type of protection bought by the insured. (i.e., type of policy and endorsements)

Deposition (Depo): The testimony of an individual made under oath but not in open court, and taken down by a court reporter to be used when case comes to trial.

Disclaimer or Denial: The process of notification of the claimant by the company that their claim has been disallowed.

Examination Under Oath (EUO): The testimony of an individual made under oath but not in open court. Taken in the presence of a court reporter, this process is done per the policy provisions and at the option of the company. It is obtained prior to the company's decision on the disposition of the claim.

Fair Market Value: The value that a used item can be sold for on an open market.

Independent Insurance Adjuster: A licensed individual that would be hired by an insurance company to adjust a claim.

Insured (Claimant): The individual who is covered by the policy by definition.

Insurable Interest: The company insures the interest an individual may have in the property, not the property itself.

Lienholder (Mortgagee): An individual or company who has an interest in the property of another as security for payment of a loan.

Mortgagee (Lienholder): An individual or company who has an interest in the property of another as security for payment of a loan.

Proof of Loss: A requirement of the insurance policy. This is used by the insured to provide information to the insurance company for the amount claimed.

Public Adjuster (PA): An individual hired by the insured to represent them in presenting their claim to the insurance company.

Repair Estimate: A break down of figures to repair the damaged item(s)

Replacement Cost Value (RCV): The amount to replace an item at the current market prices.

Rescind Policy: The act of voiding the policy back to the inception date of the policy. This may be done when it is discovered that there was misrepresentation on the application by the insured.

Staff Adjuster: An individual employed by an insurance company to adjust claims.

Void A Policy: The act of canceling a policy the date that a claim is denied. Done when an insured misrepresents the claim to an insurance company.

INFORMATION AND DOCUMENTATION FROM INSURANCE COMPANIES FILES

- Insurance Policy
- Application for Insurance Policy
- Estimates of Damage
- Proof of Loss
- Examination Under Oath by Insured
- Correspondence
- Appraisal or Survey of Property
- Payment History of Premium Insured
- Property Insurance Loss Register (PILR) Reports
- Personal Property Inventory
- Public Adjuster's Contract
- Accounting Records
- Cause and Origin Report
- Investigative Reports

NOTE: Many of the above documents are transmitted through the mails. Obtaining these letters and envelopes may aid in proving a potential mail fraud.

SAMPLE §1875.1 IC LETTER

Insurance Company

Re: XXXXXXXX Long Beach, CA
Claim/Policy No. XXXXXXX
Insured: XXXXXXXXX
Date of Incident: XXXXXX

Dear Mr. XXXXXX:

The Los Angeles County District Attorney's Office and the Long Beach Fire Department are currently conducting an investigation into the incendiary fire that occurred on April 30, 1999 at XXXXXXX in the City of Long Beach. During the course of this investigation, it has come to our attention that your agency provided insurance coverage for the occupants of the structure at this location.

In accordance with the provisions of California Insurance Code Sections 1875 through 1875.4, the Los Angeles County District Attorney's Office requires that you produce all documents in your possession relating to the above referenced individuals, corporations, and fire. The release, to the Los Angeles County District Attorney's Office, of your claims file, underwriting file, all policies of insurance, premium payment records, history of previous claims, the proof of loss, statements by persons, other relevant evidence and material relating to the investigation of the loss is required by California Insurance Code Section 1875.1. The District Attorney's Office also requests that you cooperate with the investigation being conducted as required by California Insurance Code Section 1875.2.

By cooperating with this investigation and providing the documents requested by this letter you, and the insurer you represent, come under the protection of California Insurance Code Section 1875.4 which provides for a limiting of liability for an insurer, and/or its representative, who provides information pursuant to a official request.

Please forward the requested information to:
XXXXXXXXX
XXXXXXXXXX

Thank you for your assistance and cooperation in this investigation.

Very truly yours,

XXXXXXXXXXXX

UNIT 7: INFORMATION RESOURCES

RESOURCES

There are literally hundreds of sources for information available to the investigator from both public agencies and the private sector. These sources can provide a lot of information about persons or entities. When conducting your search for this information, remember that agency names may vary from county to county. For example, to get a copy of an autopsy in Orange County, you would contact the Orange County Sheriff's Department, whereas in San Francisco County, you would contact the Medical Examiner's Office.

In each county there are law enforcement associations that consist of investigators or detectives from different agencies that have the same assignments and meet on a regular basis to share information. Examples of these law enforcement associations are:

- Arson task forces
- Fraud and check associations
- County investigators associations
- Ritual crime investigators associations
- Gang investigator associations

When requesting information from the various sources, you need to give a complete description of the individual you are investigating. The more information you can give regarding their identity, the more success you will have of getting the information you are looking for. Always give the subject's full name, any known aliases, address, date of birth, social security number, driver's license number, and a physical description. Also helpful in information searches are past residences and addresses if known.

PERSONAL HISTORY

Present and past employers can give a lot of helpful information about a subject. You can learn about work history, position, or title, wages, vehicles driven by the subject, union affiliation or association memberships. Coworkers will usually have some personal information about the subject's family situation; friends they are known to associate with and where they "hang out" after work hours.

Relatives of your subject are another good source for information. Sometimes relatives are reluctant to offer up information, but if the subject is on the "outs" with their family, they will usually cooperate.

A word of caution: If you do not want your subject to know that they are being investigated, then do not make contact with any relatives.

There are several places to consider when searching for information about your subject. These places are usually close to their residence or neighborhood. They can be bars, restaurants, bowling alleys, racing facilities, fire stations, libraries, sports parks, or hobby shops.

Vehicle information is usually important to an investigation and a search should not be limited to just the vehicle your subject typically drives. Other examples of vehicles that might be registered to your subject include:

- Motorcycles
- Bicycles
- RVs
- Boats
- Aircraft

CRIMINAL HISTORY

When searching for criminal history on a subject, there are several public agencies that can assist the investigator. The National Crime Information Center (NCIC) is a national network that provides federal, state, and local law enforcement with the criminal history of an individual in all 50 states. California Law Enforcement Teletype System (CLETS) is the state's system that tracks and records the criminal history of an individual in California.

ARSON INFORMATION REPORTING SYSTEM

In September 1997, the California Department of Justice and California Department of Forestry & Fire Protection/Office of the State Fire Marshal began a new program called the Arson Information Reporting System (AIRS). AIRS is a database of information relating to fires in California. By collecting and sharing data on fires across the state, AIRS provides investigators with information critical to the investigation and prosecution of arson fires and arson-related insurance fraud. AIRS is currently also being used by the State of Oregon.

AIRS is available to the fire service, law enforcement, district attorneys and insurance carriers. The information available from AIRS includes:

- Date/time and location of fire
- Persons and businesses involved
- Modus operandi
- Insurance claim information
- Vehicle information
- Paroled and registered arsonist data

STATE AGENCIES

There are several state agencies that can provide information to the investigator to help in their investigation. California Department of Forestry & Fire Protection/Office of State Fire Marshal, California Department of Insurance-Bureau of Fraudulent Claims, Department of Motor Vehicles, California Youth Authority (CYA)/California Department of Corrections, State Parole and California Department of Justice are a few examples of the resources available.

FEDERAL AGENCIES

There are several federal agencies available to assist the fire investigator. The two primary agencies are Bureau of Alcohol, Tobacco, and Firearms (BATF) and the Federal Bureau of Investigation (FBI). Both agencies have agents that are assigned to select task forces and can offer assistance to state and local investigators.

COURTS

The local courts are another good source for information. This would include Superior, Municipal, and Justice courts. The type of information available would be case numbers, dates and times, principals' names, case files on the court proceedings, and background information on both criminal and civil matters.

EDUCATION

Searching school records can give the investigator additional information about a person's background, training, areas of expertise, friends or associates, and can usually provide past photographs. Generally, this search includes high school, college, and trade school records.

PRIVATE INDUSTRY

In the private industry, there are numerous sources available to the fire investigator. Some of these sources can be accessed by a personal computer via the Internet. This can include information from bulletin boards such as the Information Professional Bulletin Board and Private Investigators Bulletin Board Systems.

INSURANCE INDUSTRY

The insurance industry has several resources available to aid the investigator in arson and fraud investigations. The National Insurance Crime Bureau (NICB) is an organization established by the insurance industry to aid in the detection and investigation of fraudulent claims. NICB provides all types of insurance information to the investigator regarding an individual's policy, insured property, past and current claims and the results of any investigation conducted by an insurance investigation unit. NICB can also provide the files and records of the policyholder's agent and/or adjuster.

Knowing where to look and who to contact when gathering information during your investigation is important. Doing a thorough and complete job involves utilizing several sources of information in addition to what your agency may provide.

SOURCE AND TYPE OF INFORMATION AVAILABLE

SOURCE	INFORMATION
AIR QUALITY MANAGEMENT	Commercial and industrial permit information
AIRPORT SECURITY	Ownership of aircraft
ALCOHOL, BEVERAGE CONTROL	Bar owners, fingerprints, marital status, home addresses, associates
AMERICAN MEDICAL DIRECTORY	Officers of County Medical Association, names of hospitals and sanitariums, doctors names, year of birth, medical school and year of graduation, office address

SOURCE	INFORMATION
BANKS – FINANCE COMPANIES	Name, address, employment, sources of income, expenditures, personal and business references, net worth, handwriting sample, credit and loan application information
BETTER BUSINESS BUREAU	Reputation of businesses, back issues of city directory
BONDING COMPANIES	Application for bonds, personal and business references, prior addresses and employment
BUILDING DEPARTMENT	Amount of construction costs, blue prints, plumbing, wiring and other special plans
CALIFORNIA CONFERENCE OF ARSON INVESTIGATORS	Experts of fire origin and cause, representatives in all counties in California
CALIFORNIA HORSE RACING BOARD	Backgrounds on horse owners, jockeys, trainers, persons employed by racetracks and state off-track racebooks
CHAMBER OF COMMERCE	Reputation of businesses
CONSUMER AFFAIRS	Information on persons involved in a medical or dental practice, pharmacist, barbers, funeral directors, beauticians, private investigators
COUNTY ASSESSOR	Name, address, taxes, real property taxes, property improvements
COUNTY AUDITOR	Names of county employees, occupations, pay rate, records of all financial business with the County
COUNTY CLERK – DIVORCE	Divorce records, place and date of marriage, date of separation, ages of children, community property, signature samples, income, place of employment
COUNTY CLERK – MARRIAGE	Marital status, maiden name
COUNTY CLERK – VITAL STATISTICS	Date of birth
COUNTY CORONER	Name and description of deceased, deceased property, cause of death autopsy reports
COUNTY RECORDER	Recorded deeds, grants, mortgages, wills admitted to probate, notices of liens, powers of attorney
COUNTY RECORDER – BIRTH CERTIFICATE	Name, address, date of birth, maiden name, occupation, name of physician
COUNTY RECORDER – DEATH CERTIFICATE	Location of death, birthplace, nameš of relatives, veteran status

SOURCE	INFORMATION
COUNTY RECORDER – MARRIAGE	Name, address, date of birth, occupation, maiden name
COUNTY SURVEYOR	Maps, elevations, baselines, landmarks
COUNTY TAX OFFICE	Name, address, taxes, property location, former owners, legal description of property
CREDIT AGENCIES	Names, addresses, date of birth, marital status, credit references, business associates, relative's names, location of banks and finance companies, employment
CREDIT CARD COMPANY	Credit charges, locations, hotel/motel, gasoline purchases, employment, credit references
DEPARTMENT OF CORRECTIONS – PAROLE	Gang information, criminal associates, parole status and addresses, parole searches
DEPARTMENT OF FORESTRY AND FIRE PROTECTION/STATE FIRE MARSHAL	Arson information, access to rural and mountain areas, permits, Fire Activity Pointer System (FAPS), satellite lightning strike information, weather stations. Permits for film industry, pipeline safety, fireworks information, and arson-bomb information.
DEPARTMENT OF JUSTICE	Name, address, DOB, description, photo, criminal history (California and out of state), warrants
DEPARTMENT OF MINES AND GEOLOGY	Mining, petroleum and gasoline information
DEPARTMENT OF MOTOR VEHICLES	Names, addresses, date of birth, vehicle registration, drivers license, legal owner, vehicle descriptions and previous owners, signatures, photos, vehicle traffic record, all vehicles registered to person or address
DEPARTMENT OF TREASURY	Source of information in foreign countries
DIRECTORY OF NEWSPAPERS & PERIODICALS N.W AYER & SONS – PHILADELPHIA	Guide to newspapers and periodicals printed in U.S. and possessions
DUNN AND BRADSTREET	Businesses' worth, associates, family holdings and rating, employment
FEDERAL AVIATION ADMINISTRATION	Ownership of aircraft, flight plans
FEDERAL BUREAU OF INVESTIGATION	Name, DOB, photo, criminal history
GAS AND ELECTRIC COMPANIES	Names, addresses, date of birth, employment, prior addresses, names of persons previously living at subject address

SOURCE	INFORMATION
HARBOR PATROL	Names and addresses of owners of ships, boats and yachts
HEALTH DEPARTMENT	Information on parents of children, occupation, ages, maiden name, physician name
HIGHWAY DEPARTMENT	Maps of streets, location of drains, location of utilities, conduits, right-of-ways, old name of streets
INSURANCE COMPANIES	Insurance claims, application of insured, occupation, proof of loss statement, other claims
INTERPOL	Source of information in foreign countries
LAW ENFORCEMENT - INTELLIGENCE UNIT	Names of organized crime figures, associates
LAW ENFORCEMENT ASSOCIATIONS NETWORKING	Arson task forces, fraud and check associations, county investigation associations, ritual crime investigators
LLOYDS REGISTER OF SHIPPING	Names and addresses of ships, boats and yachts
LLOYDS REGISTER OF YACHTS	Names and addresses of ships, boats and yachts
MOVING COMPANIES	Forwarding address, storage of personal property
NATIONAL CRIME INSURANCE BUREAU – PROPERTY LOSS REGISTRY SYSTEM	Arson information, insurance claims, property damage
NEWSPAPER MORGUE	Addresses, photographs, obituaries, employment, marriages, property, legal notices, fictitious names, race track information
PUBLIC ADMINISTRATOR	Disposition of monies from estate, value of estate, inventory of deceased's assets
REGISTER OF VOTERS	Name, address, occupation, political party, physical disability, name of spouse, when/where married, last place registered to vote
SCHOOL	Photograph, student records, teacher's records
SECRETARY OF STATE – CORPORATIONS	Articles of incorporation, including businesses, associations, records of elections, non-profit organizations, candidates for election, conflict of interest filings, corporation officers
SECURITIES AND EXCHANGE COMMISSION	Registration of securities offered for public sale, names and addresses of individuals and entities that have violated state or Federal securities regulations

SOURCE	INFORMATION
STATE CONTROLLER	Record of warrant drawn of the state, accounts of all persons indebted to the state
STATE OF DEPARTMENT OF AGRICULTURE	Information of cattle and dairies, information on rustlers and cattle brands
STOCK BROKER	Records of stock transactions, financial application information, profit and losses
TELEGRAPH COMPANY	Copies of money orders, telegrams, handwriting samples
TELEPHONE COMPANY	Name, address, telephone numbers, length of service, record of calls, number of extensions
TELEPHONE DIRECTORY	Name, address, telephone number
U.S. FOREST SERVICE	Arson information, access to mountain areas, satellite lightening strike data, weather stations
U.S. IMMIGRATION	Addresses of legal immigrants
U.S. STATE DEPARTMENT – PASSPORTS	Date of birth, photo, occupation
UNITED STATES POSTAL SERVICE	Name, address, names of box holders, return address, location to forward mail
WATER COMPANY	Names, addresses, prior addresses, persons previously living at subject address
WELFARE DEPARTMENT	Case history of person on welfare along with a variety of other background information

CASE MANAGEMENT REPORT								
SUBJECT BACKGROUND INFORMATION								
Case No:			**Violation:**					
Subject's Name:			Home Address:			City, State, Zip		
Work Phone:			Home Phone:			Cellular/Pager:		
Sex:	DOB:	POB:	Ht.	Wt.	Hair:	Eyes:		Race:
Driver's Lic. No.			SS No.		PD/SO No.	CII No.		FBI No.
1 - Vehicle-Year Make			Model		Color	Lic. No:		State:
2 -								
3 -								
4 -								
5 -								
Spouse Name:			DOB:		Ht.	Wt.	Hair:	Eyes	Race:
Relative-Name: Relation:			Address:					Phone:
Relative-Name: Relation:			Address:					Phone:
Relative-Name: Relation:			Address:					Phone:
Relative-Name: Relation:			Address:					Phone:
Relative-Name: Relation:			Address:					Phone:

CASE MANAGEMENT REPORT			
SUBJECT BACKGROUND INFORMATION			
Case No:	**Violation:**		
Subject Employment:	Address:		Phone:
Prior Employer:	Address:		Phone:
Previous Employer:	Address:		Phone:
Spouse Employment:	Address:		Phone:
Prior Employer:	Address:		Phone:
Previous Employer:	Address:		Phone:
High School:	Location:	Phone:	Date:
Trade School:	Location:	Phone:	Date:
College(s):	Location:	Phone:	Date:

Case No:	**Subject:**	
Associates:	Location:	Information:
1.		
2.		
3.		
4.		
Interests:		
Union:		
Social:		

Request From:	**Date Requested:**	**Information Requested:**	**Date Received:**
Air Quality Management District			
Airport Security			
Alcohol Beverage Control			
American Medical Directory			
Bank/Credit Card Companies			
Better Business Bureau			
Birth Certificate/County Clerk			
Bonding Company			
Building Department			
Bureau of ATF			
Cable Company			
Calif. Conf of Arson Investigation			
Calif. Horse Racing Board			
CDF/State Fire Marshal			
Chamber of Commerce			
CII			
Coast Guard			
Consumer Affairs			
Coroner			
County Auditor			
County Recorder			
County Surveyor			

Request From:	Date Requested:	Information Requested:	Date Received:
County Tax Collector			
Credit Agency			
Credit Union			
DA-Family Support			
DA-Fraud			
DA-Investigation Unit			
Death Certificate			
Department of Agriculture			
Department of Mines & Geology			
Department of Motor Vehicles			
Directory of Newspapers / NW Ayer & Sons, Philadelphia			
Divorce Records			
Drug Enforcement Administration			
Dunn & Bradstreet			
EDD			
Electric Company			
FBI			
Federal Aviation Administration			
Federal Communications Comm.			
Fire Department			
Gas Company			
Harbor Patrol/Master			
Health Department			
Immigration & Naturalization			
Insurance Adjuster			
Insurance Agent			
Insurance Claims-NICB			
Insurance Investigator			
Interpol-Foreign Police			
Justice Courts-Criminal and Civil			
Lloyd's Register of Shipping			
Lloyd's Register of Yachts			

Request From:	Date Requested:	Information Requested:	Date Received:
Local Narcotics Task Force			
Local Police Department			
Marriage Records			
Military Records			
Mortgage Company			
Moving Companies			
Municipal Courts-Civil			
Municipal Courts-Criminal			
NCIC			
Newspaper Morgue			
Parole			
Post Office			
Probation			
Public Administrator			
Registrar of Voters			
School District			
Secretary of State			
Securities Exchange Commission			
Sheriff's Office			
State Controller			
State Department-Passports			
Stock Broker			
Superior Courts-Civil			
Superior Courts-Criminal			
Telegraph Company			
Telephone Company			
Treasury Department			
USDA Forest Service			
Veterans Administration			
Water Company			
Welfare Department			

UNIT 7: INFORMATION RESOURCES

BUILDING CONSTRUCTION AND TERMINOLOGY

Our mission as investigators is not only to determine the cause of the fire, but also to identify the factors that contributed to fire growth and spread. By identifying and reporting events that cause fires to rapidly grow and spread to adjacent materials and components within a building, necessary steps can be taken to reduce the number and severity of hostile fires. Thus, a fire investigator must remember that his/her objective is to determine the cause of every fire, not merely to "rule-out" arson.

The methodology of fire investigation includes reconstruction of the fire scene and examination of the "telltale footprints" left by the fire on its path from the point(s) of origin throughout the building. Fire cause determination begins with a systematic process of scene examination. When the investigator has identified the material(s) first ignited, the source of heat causing ignition, and the act or omission that brought the flammable material and heat source together at the instant of ignition, he/she has determined the cause of the fire. Investigators must be both aware of the effects of building components and systems on fire growth and spread, and able to use available data to evaluate these factors.

Fire investigators also must develop a working knowledge of construction terms. These terms are frequently used in investigative reports and courtroom testimony. As Francis L. Brannigan states in his book, *Building Construction for the Fire Service*, "All fire officers need an accurate knowledge of building terms. If fire officers make glaring errors in terminology, such as referring to "I-beam columns," it may be very difficult for building professionals or tradespersons to believe their fire protection recommendations." You will find a list of common construction terms at the end of this chapter. This is by no means a list of each and every construction term, however, it provides a quick reference to some of the more commonly used terms and will assist you when compiling reports or preparing for a courtroom presentation. Along with a working knowledge of construction terminology, the investigator needs to have a clear and correct understanding of construction components, building systems, and construction drawings.

CONSTRUCTION DRAWINGS

Construction drawings are a two-dimensional representation of a building or structure. Construction drawings are sometimes referred to as "building plans" or "blue prints." Engineers, draftspersons, or architects prepare these drawings for building construction professionals. A complete set of construction drawings may contain several dozen pages of various building views, component details, and system specifications. Construction drawings are divided into four overall views of the building: plan view, elevation view, sectional view, and detail view.

Plan View

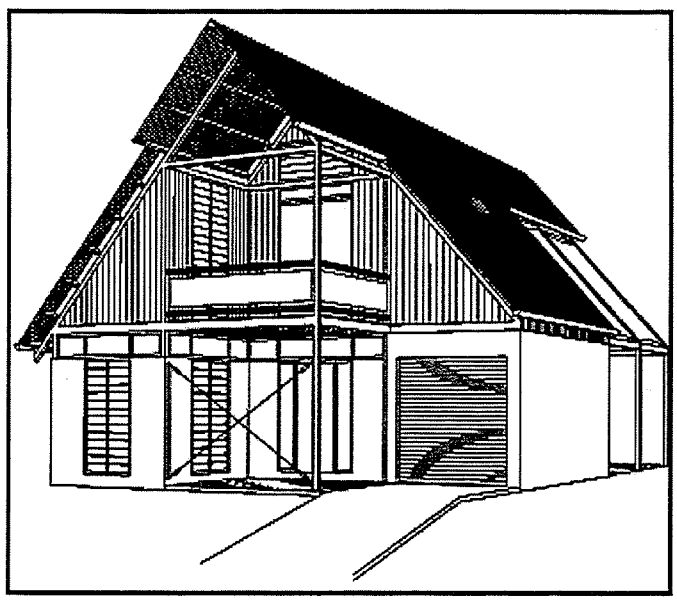
The plan view provides a site or plot plan that serves as an overall view of the entire property including the building's placement on property, property lines, and utility services provided to the building. Using the site or plot plan, an investigator can determine the building's relationship to roads, and exposures as constructed. Typically, the building construction type and the total square footage of the building are listed on this page.

Floor Plan View

The floor plan is a basic layout of the building as if the roof were removed and only the walls are visible. Commonly viewed as the most important construction drawing, the plan view proves invaluable when the investigator is attempting to locate walls, doors, windows, hallways, floor openings, stairwells, and other building components necessary for reconstruction of the fire scene.

Elevation View

The challenge begins when the investigator arrives at scene to find only a foundation. It is only with the aid of an elevation view of photograph, that the investigator can visualize the overall appearance of the building before the fire. An elevation view is a two-dimensional exterior view of the building. Elevation views are labeled according to the direction in which the wall faces. You can use the elevation view in determining the exterior finish materials, location and size of doors and walls.



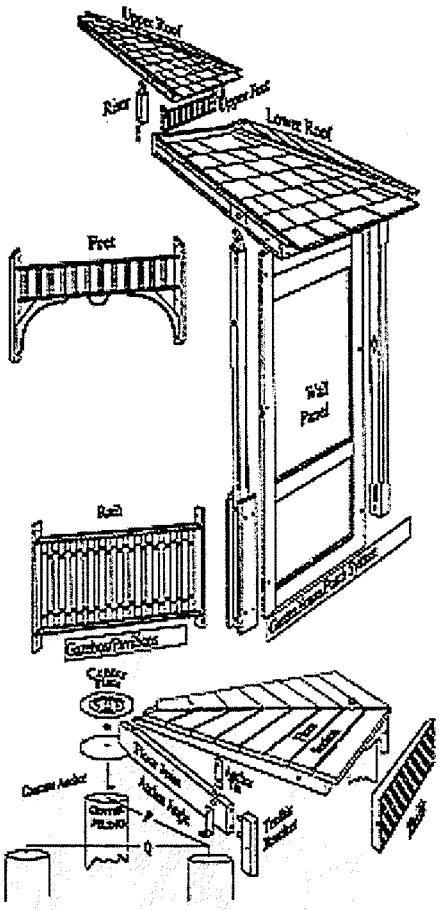
Example of an elevation view.

Sectional View

Drawings of the building or structure as if it were cut in two, are sectional views. There is a variety of sectional views. Regardless of which variation of sectional view the investigator has at his or her disposal, the investigator is able to determine how the building appeared on the interior, from a horizontal or vertical view of a sectional cut away of the building portion shown. Sectional views are especially useful when determining how construction systems such as heating, ventilation, and air conditioning (HVAC) are plumbed within the building.

Detail View

Architects, engineers, and draftspersons use detail drawings to assist building construction professionals in the installation of specialized construction components and systems. Such detail views are common when the building designer specifies a particular firewall system or construction method. Detail views are essential when determining if building failure or fire spread was cause or contributed to by failure of the builder to comply with the construction specifications as shown in the detail view.



Example of a detail view.

In addition to the construction drawing already discussed, building designers use many types of drawings to illustrate building components and systems to be installed in the building. Electrical, mechanical, and fire protection system drawings should be reviewed by the investigator.

Investigation of nearly every building fire includes the examination of the electrical system. Electrical drawings provide the investigator with a view of the electrical layout within the building and the general location of electrical outlets, overhead lights, and electrical services. It must be remembered, however, that these drawing are only a design for the construction professional to reference and may not be demonstrative of the actual systems as installed.

Frequently fire spreads throughout a building via the ducting serving the heating, ventilation and air conditioning (HVAC) systems. Review of the mechanical drawings may assist the investigator in reconstructing the path of the fire throughout the building. Consultation with a mechanical engineer or contractor may be necessary due to the complexity of many HVAC systems.

Fire detection and alarm systems, sprinkler systems, and special systems are required to be designed by a fire protection specialist and provided to the fire department for review before installation. Fire department archives should provide a history of the fire protection systems within the fire building. By referencing these plans, the investigator will be able to determine the layout and capabilities of the fire systems within the building.

Due to the technical nature of construction drawings, it may be necessary for the investigator to consult with construction professionals to determine what is represented on the drawings. Members of

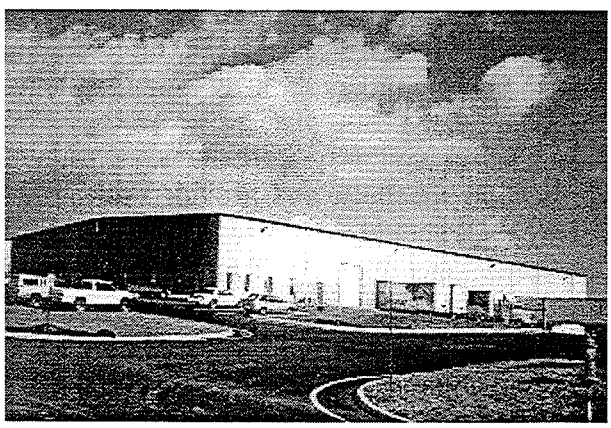
the fire prevention bureau or building department are often the best resource in deciphering a difficult set of building plans. In addition to the construction drawings that were provided to the contractor, after the fact drawings, called "as built" drawings, are provided to the building owner, when, due to technical difficulties during construction, the original plans were not adhered to. If available, the investigator should review the "as built" drawing for the most accurate building data. Investigators must not under estimate the value of construction drawings in understanding fire spread and growth within a structure and refer to construction drawings before making a fire cause determination.

TYPES OF CONSTRUCTION

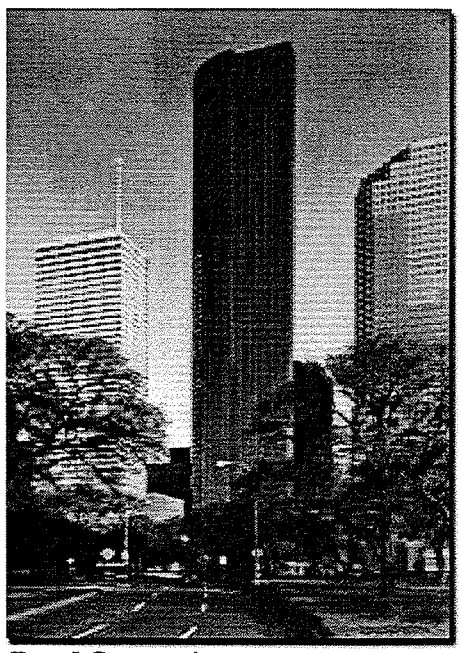
The materials of which a building is constructed determine its' resistance to fire. Fire resistance of a material is dependent upon its combustibility, dimension and density, chemical composition, and thermal conductivity. An investigator must understand how construction materials are affected by heat. As an example, large dimension lumber, such as laminated timbers, are extremely resistant to fire and will remain intact after extended fire exposure. Understanding the relationship between fire resistance and fire spread provides the investigator with the knowledge necessary to determine were the fire burned the longest and with the greatest intensity. Though materials used in building construction are many and varied, building construction types have been divided into five general types and assigned a roman numeral: I) fire resistive, II) noncombustible, III) ordinary, IV) heavy timber, V) wood frame.

Type I, or fire resistive construction, is not only constructed, of noncombustible materials, such as iron, steel, masonry, or concrete, but has a specified minimum fire resistive requirement for structural members measured in hours.

Type II, or noncombustible construction, is of the same materials as Type I construction. There may however, be no fire resistive requirements for its structural members.



Type II Construction

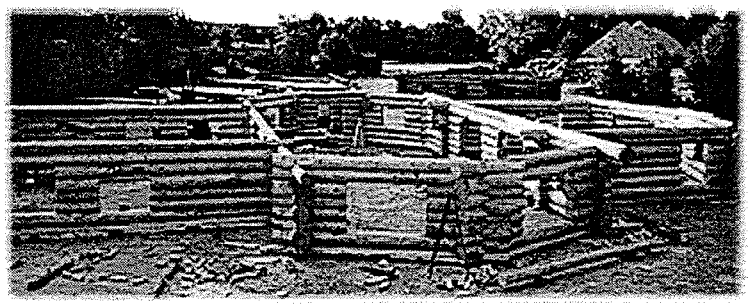


Type I Construction

One of the earliest forms of construction used to prevent conflagrations, Type III, or ordinary construction, is often referred to as "brick and joist" construction. The exteriors of the structure and structural exterior members are noncombustible. Thus, stucco buildings with combustible interior wall members, although covered with noncombustible stucco are not Type III buildings. Interior floors and walls may be constructed of combustible material.

Type III Construction

Type IV or heavy timber construction is extremely rare in modern construction due to the large size of the wooden members required and the cost associated with such construction. Structural elements within a Type IV building are typically no less that 4"x6" in size.

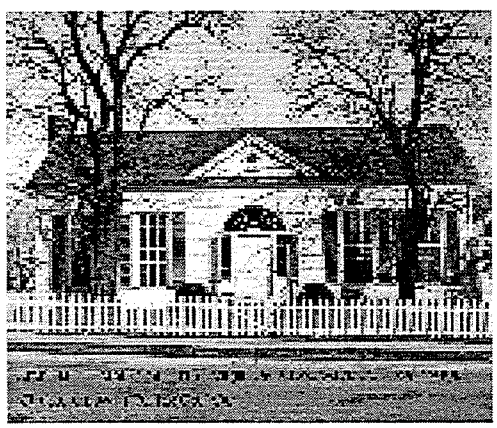


Type IV Construction

Type V or wood construction is composed of any building material allowed by the code. The most common construction type in America, Type V construction is generally wood frame. Many buildings are of mixed construction types and can seldom be identified without referring to the original construction drawings.

Unless the investigator is certain of the construction type of the building, the construction type should not be indicated in the investigative report. Rather, describe the construction of the building. As an example, "The building was a two-story masonry block building with a metal roof and parallel cord truss of tubular steel construction."

A working knowledge of construction types, building systems, and construction terminology are essential to an investigator. With such knowledge, the investigator will better understand the effects of building construction materials, components, and systems on fire growth and spread. Using



Type V Construction

their knowledge, they can accurately reconstruct the fire origin area and decipher burn patterns to determine the origin and cause of the fire.

EFFECT OF BUILDING COMPONENTS AND SYSTEMS ON FIRE GROWTH AND SPREAD

Dynamic by nature, fire spreads rapidly during the free-burning stage, filling the fire compartment with hot gases. These super heated gases seek the path of least resistance and spread, via building components and systems, to adjoining building compartments and into the structure itself. Construction materials, building systems, and interior finishes contributed to death and injury in many of the fires of infamy.

On November 28, 1942, in Boston, Massachusetts, a match reportedly used for illumination caused a fire. Palm fronds used as interior decorations spread fire throughout the interior of the Coconut Grove nightclub with such rapidity that 492 persons perished.

Eighty-five lives were lost and 600 persons injured in the fire that swept through the MGM Grand Hotel in Las Vegas, Nevada, on November 21, 1980. Many of the deaths were on the hotel floors not directly affected by the fire. Poor maintenance of fire and smoke dampers, and fire doors propped open between floors, directly contributed to the spread of fire and poisonous gases into the upper floors of the building.

These are only two of the many hundreds of examples available. Nevertheless, they forcefully illustrate the importance of thorough investigation of every fire. It is our goal to determine what factors contributed to the spread of fire and gases within the fire building and what systems failed or effectively controlled the fire. Too many investigators fall short of their responsibility and view fire investigation as an arson suppression function only. Appreciation of the effects of building components and systems on fire growth and spread, both assists the investigator in determining the origin and cause of the fire and in collecting the data necessary to develop codes, standards and programs to prevent like fire.

The following are examples of building systems, components, and features that should be considered when investigating a fire. The variables affecting fire growth and spread are so many and varied that it is impossible to list them all. However, these examples illustrate the importance of systematic analysis of building systems and structures as a function of every fire scene examination.

Interior Finishes

Combustible interior finishes generate smoke, fuel the fire, and provide a pathway for fire spread from the material first ignited into the building structure. The flammability of interior finish materials must be considered when evaluating fire growth. If constructed of combustible materials, acoustical tiles and other ceiling finishes when heated sufficiently, produce flammable gases across the entire ceiling area. Reaching their ignition temperature, the gases ignite. Thus, the entire room begins to burn.

Much like combustible ceiling finishes, floor covering, such as carpet and linoleum, produce highly flammable gases. Fire research has found that flammable floor finishes are a leading factor in rapid fire growth.

Even the paint covering the walls may be flammable. Fires in apartment house stairwells, devoid of any visible fire load, have burned with such intensity that occupants were trapped within their rooms. Layer after layer of oil based paints provided the fuel needed to spread fire up the stairwell and into the interior of the building

Concealed Spaces

Remodeled buildings are notorious for concealed spaces. These voids are the ideal location for fires to begin and burn undetected. Interconnected void spaces form a pathway through which fire spreads from one area into another. Fires in voids when discovered often prove difficult to suppress. Many fires that appeared to be "bread and butter" operations were hampered by stubborn fires in building voids and ultimately the building was abandoned and defensive operations began.

Fire traveling through voids may manifest itself at a location far removed from the true fire origin and appear to be a second origin.

Heating Ventilation and Air Conditioning (HVAC)

When fire and smoke dampers are not installed, or are not properly maintained, fire and smoke quickly spreads through ducting. HVAC systems that are not inter-linked with the automatic detection systems continue to operate in a fire condition and literally blow fire into additional rooms and floors of the fire building.

Balloon-Frame Construction

What may appear to be a nuisance fire confined to the exterior wall of a balloon-frame building will travel up the interior of the wall undetected and may breakout several floors above the origin. Firefighters, on more than one occasion, have left the fire scene only to return several hours latter to a rekindled fire in the attic. In buildings of balloon-frame construction, fire investigators need to inspect thoroughly the entire structure before making a fire cause determination.

Interior Decoration

In buildings touted as "absolutely fire proof," like the Iroquois Theater in which 603 persons perished, flammable decorations fuel death-dealing flames within a noncombustible building. Use of polyurethane foams and other highly combustible materials in the manufacturing of furnishings has increased fire loading in all types of occupancies. Firefighters will report high heat conditions to first

arriving investigators claiming, "The fire was too hot to be accidental." All hydrocarbon derivatives, including foams and plastics, have higher BTU potential than wood and other more traditional fabrics and furniture fillers. In rooms decorated with foam filled furnishings, flashover can be expected in three to five minutes or less. Rapid fire buildup, often believed to be an indicator of the presence of flammable liquids, may be caused instead by the involvement of interior furnishings.

As early as 1873, fire chiefs began to appreciate the importance of fire investigation. During their first meeting, the International Association of Fire Chiefs (then known as the National Association of Fire Engineers) discussed the importance of, "A system, of minute and impartial inspection after the occurrence of every fire, and rigid inquiry into the cause, with reference to their future avoidance. Our purpose as fire investigators continues to be the prevention of future fires. We can only accomplish this mission if we use all the tools and knowledge available to us. Through the utilization of construction drawings, the careful examination of building components and systems, and a comprehensive knowledge of construction types and terms, we will accurately identify the factors that contribute to fire growth and spread and accurately determine the origin and cause of the fires we investigate.

CONSTRUCTION TERMINOLOGY

139 Neutral Wire: ..... Grounded wire that carries current back to the source. Identified by white insulation.

Aggregate:..... The sand or stone mixed with cement and water to make concrete or mortar.

AHJ:..... (Authority Having Jurisdiction) Has legal ability to approve or require equipment, procedures, and code concerns for that jurisdiction.

Anchor Bolt:..... Anchor bolts tie the sill to the foundation.

Astragal:..... Half-round molding with a raised central spine and a cove or square fillet on either side.

Ballast:..... Device in fluorescent lamp circuit to start and stabilize light.

Balloon Frame:..... Type of construction in which wall studs run uninterrupted from foundation to rafters.

Balusters:..... Upright supports for a stairway.

Balustrade:..... Railing on unenclosed edge of stairway.

Base Shoe:..... Strip of wood trimming the bottom of baseboard.

Baseboard:..... Board used to cover the junction between an interior wall and the floor.

Beam:..... A structural member used to transfer a force (weight) perpendicularly for support

Beam, Collar:..... Beam used as support for wall or ceiling.

Beam, I:..... Steel girder used as support in place of load-bearing wall.

Bearing Wall:..... A bearing wall is capable of supporting a vertical load, such as a floor or roof, in addition to it own weight.

Bituminous:..... Refers to a material that contains tar or asphalt-like substance. Bituminous materials used in roofing include tar and tar-impregnated papers.

Blind-Nailing:..... Nailing boards through edges to conceal nail heads.

Bridging:..... Bracing for joists.

BTU:..... (British Thermal Unit) Unit of heat energy.

Buttering:..... Applying mortar to a surface.

Cable Connector:..... Fastener for armored cable or conduit to outlet box.

Casing:..... Trim around the outside and inside of a door or window

Ceilings, Suspended: ....Panel ceilings hung from joists or old ceiling.

Cement, Masonry:.....Mixture of Portland cement and hydrated lime.

Cement, Portland:.....Bonding agent in mortar, grout, and concrete.

Circuit:.....A continuous path for electricity. In a household electrical system, a branch circuit begins at the service panel, runs to switches, outlets, and fixtures and returns to the panel.

Circuit Breaker: .....Resettable safety to prevent excess electrical current.

Closed Sheeting: .....May be plywood or adjoining 1"x4".

Column:.....A column, strut, or post is a structural member subjected to compression.

Concrete: .....A mixture of cement, filler, and water.

Contact Cement:.....Adhesive that bonds coated objects on contract.

Coping:.....A method of joining trim at inside corners. One piece is cut to follow the profile of an adjoining piece.

Cornice:.....Horizontal molding projecting along the top of a wall or building. Also decorative strip above a window.

Countersinking:.....Recessing nail or screw heads below the surface of wood.

Crawl Space:.....Used for egress through foundation to the area below the floor of a structure. This must be at least 18" square.

Cripple: .....A cripple is a framing stud that extends from the header over doors and windows, to the plate.

Cross Grain: .....Wood grain that deviates from the main pattern of length of timber.

Curing:.....Hardening of moistened cement mixtures.

Curtain Wall:.....A curtain wall is an exterior, nonbearing wall more than one story in height. This type of wall is usually supported by the structural frame.

Cut Nail:.....Nail with rectangular shank and blunted point.

Dado: .....Groove cut into the face of a piece of wood. Used for joints.

Diagonal Bracing: .....Bracing is a structural member that is used to give rigidity to a structure.

Drip Caps:.....Waterproofing flashing over door and window frames.

Ducts:.....Tubes that carry forced-air heating and cooling systems.

Duplex Outlet:.....Two receptacles.

Eaves: ..... Lower horizontal edges of a roof. The extension of the rafters beyond the exterior wall. May be opened or closed.

Efflorescence:..... A white, powdery deposit of mineral salts on masonry or plaster as a result of evaporation.

Exterior Wall: ..... An exterior wall separates the interior from the exterior of a building. Such a wall is usually exposed to the weather, although this is not always so. This type of wall forms the extent or boundary of the building.

Fascia:..... Trim boards that cover rafter edges along eaves and rakes.

Feathering: ..... Thinning edges of coating or patch to blend with surrounding surface.

Felt: ..... Felt paper is used between the roof covering and the sheeting and between the exterior wall covering and the sheeting. Purpose...weatherproofing.

Finishing Nail:..... Nail with thin pointed shank and small head.

Fire Partition: ..... A partition that serves to restrict the spread of fire but does not qualify as a firewall.

Fire Stops:..... Fire stops are placed strategically throughout the structure to prevent the spread of fire, vertically and horizontally in walls, partitions, and floors. A 2" nominal thickness wood plant is required. Horizontal fire-retardant pieces placed between wall studs.

Firewall: ..... A firewall may be broadly defined as a wall erected to prevent the spread of fire. To be effective, firewalls must have sufficient fire resistance to withstand the effects of the most severe fire that may be expected to occur in the building and must provide a complete barrier to the spread of fire. Any openings in a firewall must be suitably protected.

Flashing:..... Strips of material (usually metal) used to waterproof roof joints.

Flue: ..... Metal or terra cotta pipes that channel smoke and hot gases up, through, and out of the house.

Footing: ..... Concrete supports of load-bearing posts. A part of a structure's foundation. Transmits its portion of the weight of the structure to the supporting earth.

Foundation: ..... Supports the entire weight of the structure and transmits this weight to the footing.

Frame, Finish:..... Stationary pieces next to the movable parts of a door or window.

Frame, Rough: ..... Framework surrounding a door or window opening, covered by trim. Also called "rough opening."

Framing:..... The structural skeleton of a building.

Frieze:..... Board at top of siding under the soffit

Frost Line:..... Deepest level at which frost penetrates soil.

Fuse:..... Replaceable safety device that prevents excess current flow.

Girder:..... A girder is a heavy beam usually larger in depth and in weight than a beam. A girder usually frames between columns or walls and supports either beams or joists.

Girt:..... A girt is a horizontal member that usually frames in between posts or columns around the exterior of a building. Girts may support loads, wall coverings, etc. Girts tend to tie a structure together about its circumference.

Ground:..... Connection of circuit components to earth for safety.

Grout:..... Filler for spaces between tiles.

Hardwood:..... Lumber from deciduous trees; used for its strength and beauty.

Header:..... Top frame support for doorway arch or window opening.

Hip Roof:..... Roof that slopes on four sides.

Hot Wire:..... Wire that carries the current forward from source. Often identified by black or red insulation.

Interior Wall:..... An interior wall is wholly within a building and is not exposed to the weather.

Jamb, Window:..... Part of frame that holds window sash.

Joist:..... Horizontal structural beams supporting ceilings and floors.

Lath:..... Wood or metal lattice on which plaster is laid.

Lintel:..... Load-bearing horizontal beam above masonry doorway, arch, or window opening.

Lock Set:..... Hardware for door latch and lock.

Member:..... A member is a unit part of a structure, such as a column, beam, or girder.

Mud Sill:..... A horizontal wooden member that rests upon the top of a foundation wall of a building. The vertical framing of the exterior walls and the first floor wooden floor joists are supported by these members.

Nonbearing Wall:..... A nonbearing wall is not designed to support a vertical load.

Open Sheeting:..... Supports the roof covering. Open sheeting consists of 1"x4" spaced four inches apart. This sheeting is normally found under shake roofs. Modern

construction methods are using plywood sheeting. This is normally ½" plywood.

Panel Wall: ..... A panel wall is an exterior wall one-story in height. In a multi-story building, this type of wall must be supported at each floor level.

Parapet Wall: ..... A parapet wall is that portion of a wall that extends above the roof.

Parquet: ..... Wood tile.

Particleboard: ..... Sheet of material made from compressed wood chips.

Partition: ..... A partition is an interior wall, one story or less in height, that separates two areas. Such a wall may be either bearing or nonbearing.

Party Wall: ..... A party wall usually lies on an interior lot line dividing two buildings, which may not belong to the same ownership. A party wall, however, is used in common as a part of each building and can be either bearing or nonbearing.

Pilot Hole: ..... Hole drilled to receive shank of screw; prevents splitting of wood.

Plastic Laminate: ..... Durable thin sheet or resin-impregnated paper.

Plate, Sole: ..... Bottom beam of wall frame.

Plate, Top: ..... Top beam of wall frame

Platform Frame: ..... Standard type of construction in which each floor is built separately.

Plywood: ..... Sandwich of thin layers of wood laminated together.

Putty, Wood: ..... Compound used to fill and conceal cracks and depressions in wood.

Quad Outlet: ..... Four receptacles

R-Value: ..... Measurement of a material's ability to slow the passage of heat.

Rabbet: ..... Notch in the face of a piece of wood, along its edge or at the end.

Rafter: ..... A rafter is a wood roof joist to which wood roof boarding is nailed: normally 2"x4" or 2"x6" spaced 24" on center.

Ridgepole: ..... A ridge is the highest part of a roof. The horizontal member that frames between the upper ends of the roof rafters at the ridge is called the ridgepole.

Sill: ..... The sill illustrated is the horizontal framing at the bottom of a window.

Sole Plate: ..... The sole plate rests on the header and supports the vertical frame members.

Structure: ..... A structure is composed of various types of structural members that are arranged and joined together to support a given load or loads, or to shelter. Examples are a building, bridge, or tower.

Studs:..... A stud is a vertical member used in partitions and walls. Boarding and lath are nailed or fastened to the edges of the studs to form a partition or wall: 2"x4" spaced 16" on center.

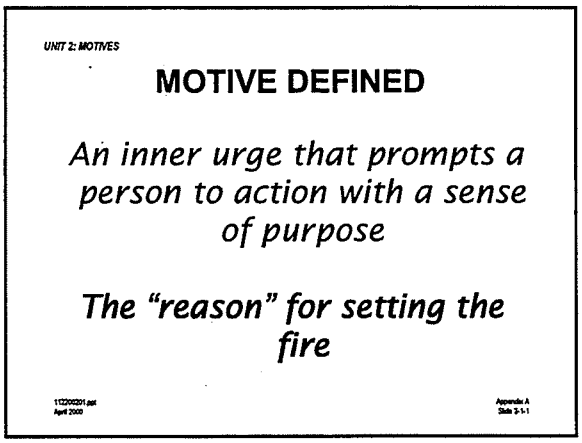
Wall, Knee: ..... Wall at low end of sloped ceiling.

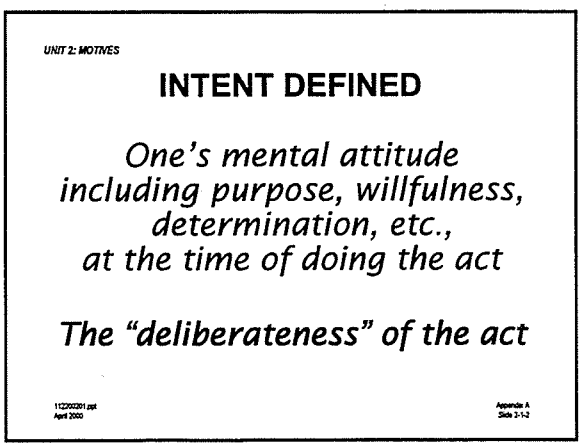
Walls, Bearing: ..... Walls that support second-floor joists or roof.

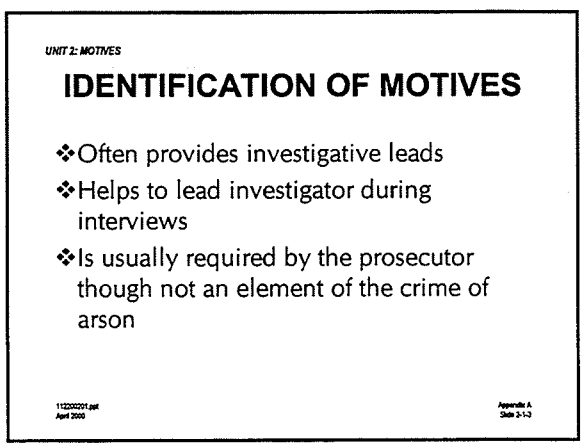
Walls, Nonbearing: ..... Nonsupporting walls, also called "partitions."

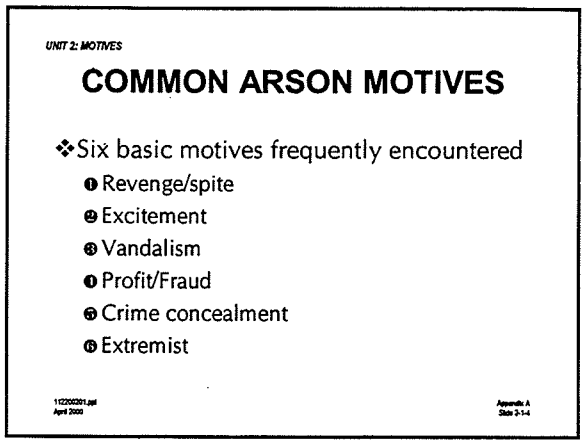
APPENDIX A

SLIDE NOTES


UNIT 2: MOTIVES
MOTIVE DEFINED
An inner urge that prompts a person to action with a sense of purpose
The "reason" for setting the fire


UNIT 2: MOTIVES
INTENT DEFINED
One's mental attitude including purpose, willfulness, determination, etc., at the time of doing the act
The "deliberateness" of the act


UNIT 2: MOTIVES
IDENTIFICATION OF MOTIVES
Often provides investigative leads
Helps to lead investigator during interviews
Is usually required by the prosecutor though not an element of the crime of arson


UNIT 2: MOTIVES
COMMON ARSON MOTIVES
❖Six basic motives frequently encountered
❶ Revenge/spite
❷ Excitement
❸ Vandalism
❹ Profit/Fraud
❺ Crime concealment
❻ Extremist
1122002001.ppt
April 2000
Appendix A
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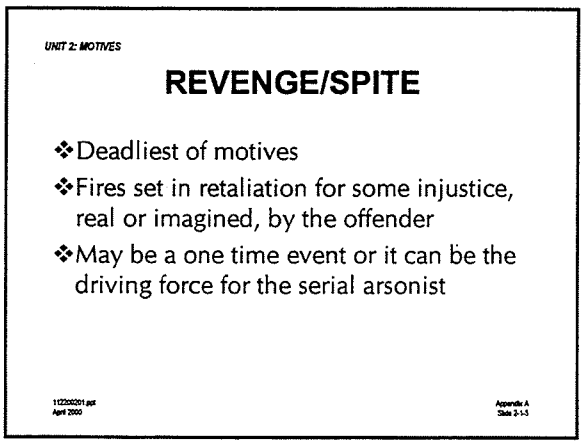
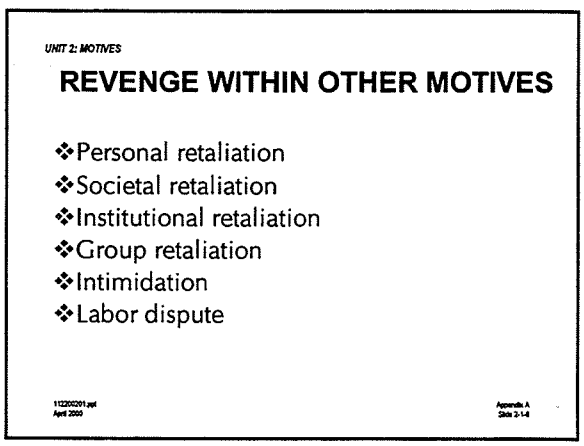

UNIT 2: MOTIVES
REVENGE/SPITE
❖Deadliest of motives
❖Fires set in retaliation for some injustice, real or imagined, by the offender
❖May be a one time event or it can be the driving force for the serial arsonist
1122002001.ppt
April 2000
Appendix A
Slide 2-1-5


UNIT 2: MOTIVES
REVENGE WITHIN OTHER MOTIVES
❖Personal retaliation
❖Societal retaliation
❖Institutional retaliation
❖Group retaliation
❖Intimidation
❖Labor dispute
1122002001.ppt
April 2000
Appendix A
Slide 2-1-6

UNIT 2: MOTIVES

TARGETED PROPERTY

- Victim generally has a relationship with the offender
- Females target personal effects
- Residential and vehicles
- Serial arsonists tend to choose unrelated targets at random

1122002S1.ppt
April 2000
Appendix A
Slide 2-1-7

UNIT 2: MOTIVES

FIRE SCENE INDICATORS

- Females burn items of personal significance
  - Living room
  - Bed
  - Mate's vehicle
- Males are more destructive
  - Large amount of accelerant
  - Fire bombs

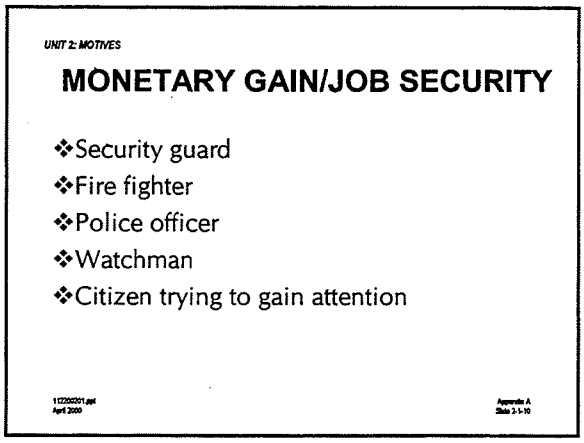
1122002S1.ppt
April 2000
Appendix A
Slide 2-1-8

UNIT 2: MOTIVES

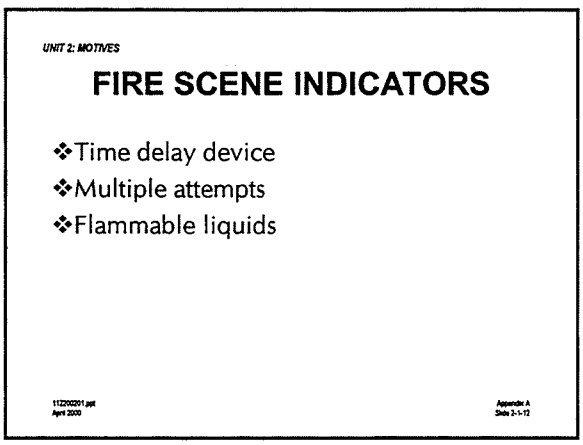
EXCITEMENT

- Craves excitement
  - Thrill seeker
  - Attention seeker
  - Recognition
  - Hero –vanity

1122002S1.ppt
April 2000
Appendix A
Slide 2-1-9


UNIT 2: MOTIVES
MONETARY GAIN/JOB SECURITY
❖Security guard
❖Fire fighter
❖Police officer
❖Watchman
❖Citizen trying to gain attention


UNIT 2: MOTIVES
TARGETED PROPERTY
❖Dumpsters/trash
❖Vegetation
❖Lumber piles or cord wood
❖Construction sites
❖Residential garages/carports
❖Fires usually start small and insignificant


UNIT 2: MOTIVES
FIRE SCENE INDICATORS
❖Time delay device
❖Multiple attempts
❖Flammable liquids

UNIT 2: MOTIVES

FIRE SCENE INDICATORS

- Sexual perversion
  - Semen
  - Feces
  - Pornographic material
  - Women's undergarments

1122000201.ppt
April 2000
Appendix A
Slide 2-1-13

UNIT 2: MOTIVES

VANDALISM

- A malicious and mischievous motivation usually by juveniles ages 4-12
  - Mischief
  - Peer pressure
  - Initiation
  - Excitement
  - Curiosity

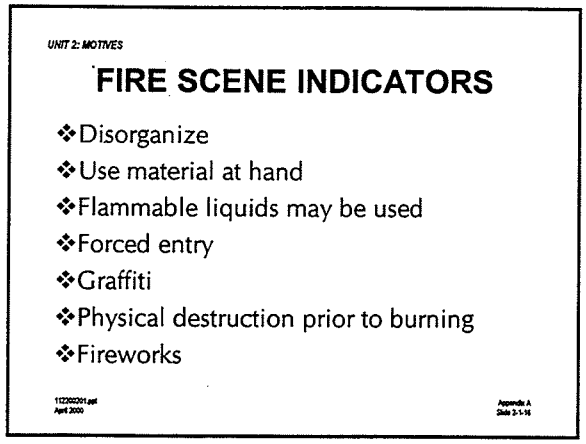
1122000201.ppt
April 2000
Appendix A
Slide 2-1-14

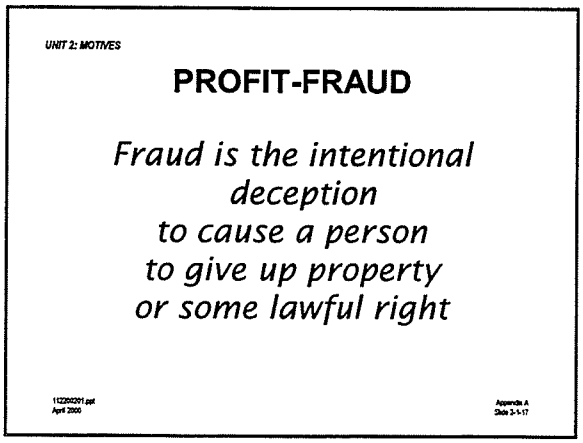
UNIT 2: MOTIVES

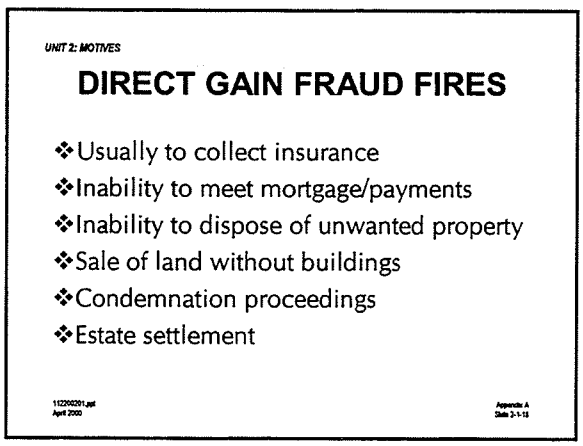
TARGETED PROPERTY

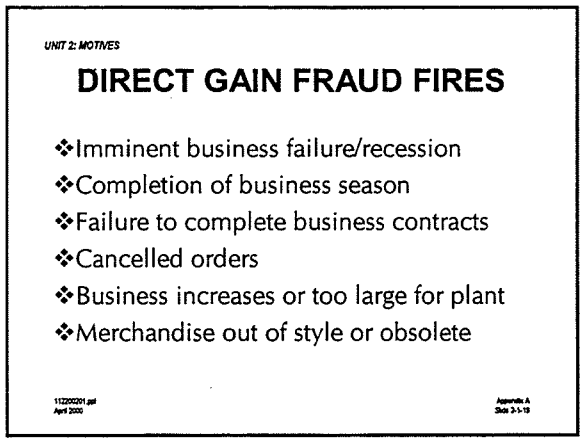
- Schools
- Vegetation
- Vacant buildings
- Dumpsters/refuse
- Children may set fires In closets, under beds

1122000201.ppt
April 2000
Appendix A
Slide 2-1-15

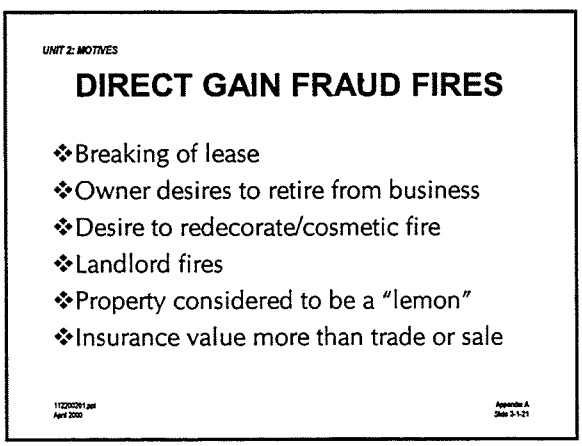

UNIT 2: MOTIVES
FIRE SCENE INDICATORS
❖Disorganize
❖Use material at hand
❖Flammable liquids may be used
❖Forced entry
❖Graffiti
❖Physical destruction prior to burning
❖Fireworks

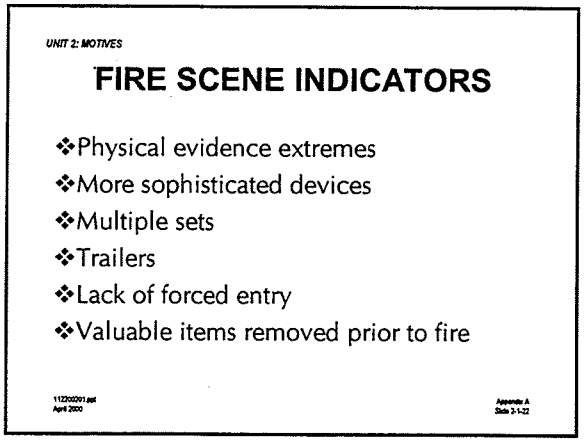

UNIT 2: MOTIVES
PROFIT-FRAUD
Fraud is the intentional deception to cause a person to give up property or some lawful right

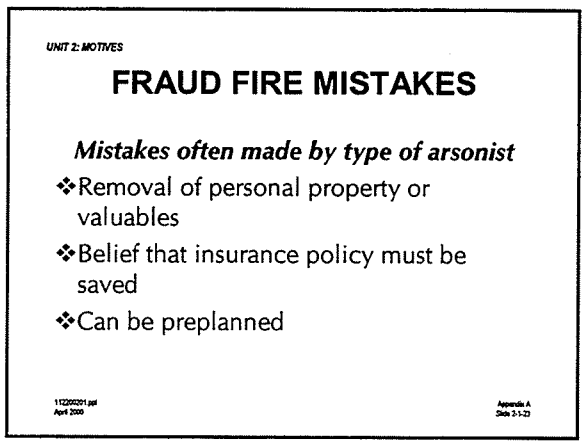

UNIT 2: MOTIVES
DIRECT GAIN FRAUD FIRES
❖Usually to collect insurance
❖Inability to meet mortgage/payments
❖Inability to dispose of unwanted property
❖Sale of land without buildings
❖Condemnation proceedings
❖Estate settlement

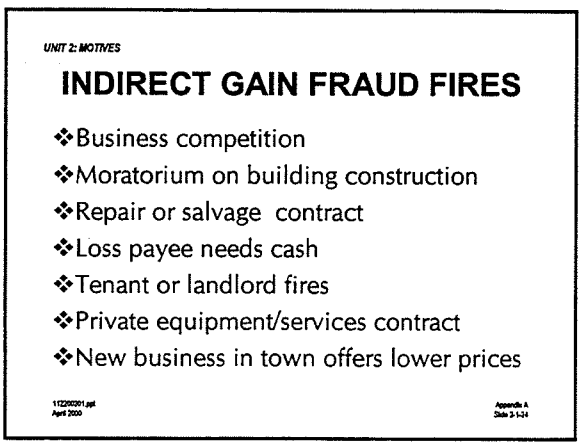

UNIT 2: MOTIVES
DIRECT GAIN FRAUD FIRES
❖Imminent business failure/recession
❖Completion of business season
❖Failure to complete business contracts
❖Cancelled orders
❖Business increases or too large for plant
❖Merchandise out of style or obsolete


UNIT 2: MOTIVES
DIRECT GAIN FRAUD FIRES
❖Business partners disagree
❖Dissatisfaction with property location
❖Condemnation of property
❖Change in traffic patterns
❖Outstanding accounts receivables
❖Equipment/machinery obsolete


UNIT 2: MOTIVES
DIRECT GAIN FRAUD FIRES
❖Breaking of lease
❖Owner desires to retire from business
❖Desire to redecorate/cosmetic fire
❖Landlord fires
❖Property considered to be a "lemon"
❖Insurance value more than trade or sale


UNIT 2: MOTIVES
FIRE SCENE INDICATORS
❖Physical evidence extremes
❖More sophisticated devices
❖Multiple sets
❖Trailers
❖Lack of forced entry
❖Valuable items removed prior to fire


UNIT 2: MOTIVES
FRAUD FIRE MISTAKES
Mistakes often made by type of arsonist
❖Removal of personal property or valuables
❖Belief that insurance policy must be saved
❖Can be preplanned


UNIT 2: MOTIVES
INDIRECT GAIN FRAUD FIRES
❖Business competition
❖Moratorium on building construction
❖Repair or salvage contract
❖Loss payee needs cash
❖Tenant or landlord fires
❖Private equipment/services contract
❖New business in town offers lower prices

UNIT 2: MOTIVES

MISCELLANEOUS FRAUD FIRES

- Organized criminal activity
- Building construction
- Building demolition

1122002O1.ppt
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Appendix A
Slide 2-1-25

UNIT 2: MOTIVES

CRIME CONCEALMENT

- Arson is secondary to the primary criminal activity
  - Murder or suicide
  - Burglary
  - Embezzlement
  - Larceny
  - Records destruction
  - Theft

1122002O1.ppt
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Appendix A
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UNIT 2: MOTIVES

TARGETED PROPERTY

- May be any type of property depending upon the primary criminal act
- The fire origin may indicate the intent to conceal
- Diversion for other criminal activity

1122002O1.ppt
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Appendix A
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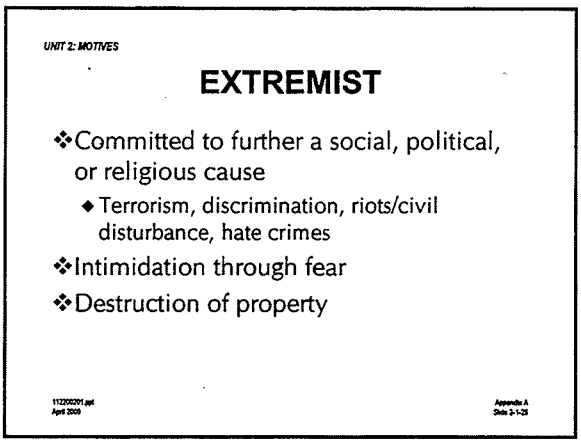
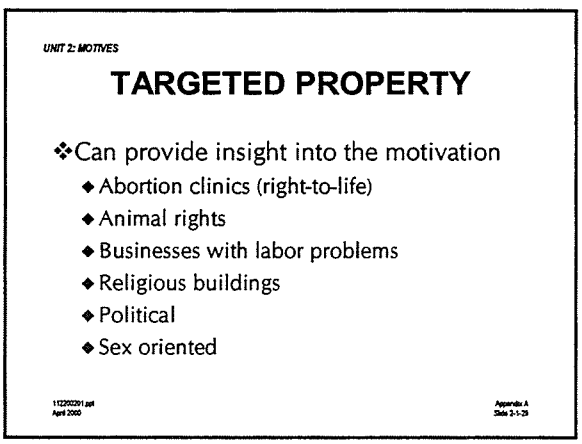
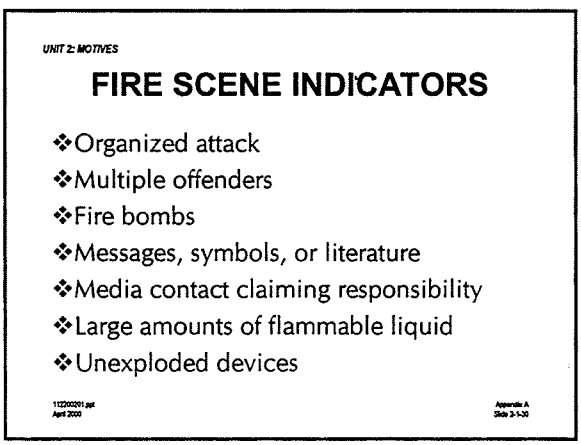
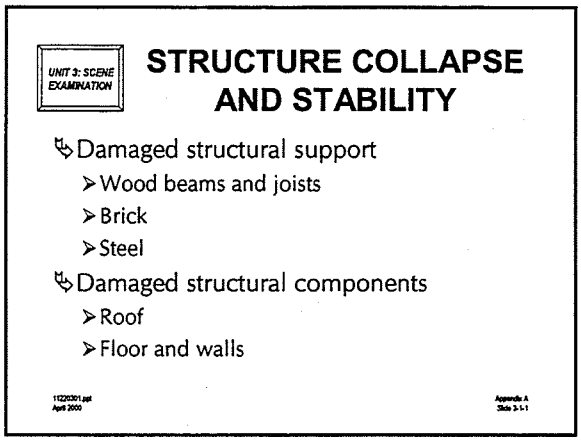
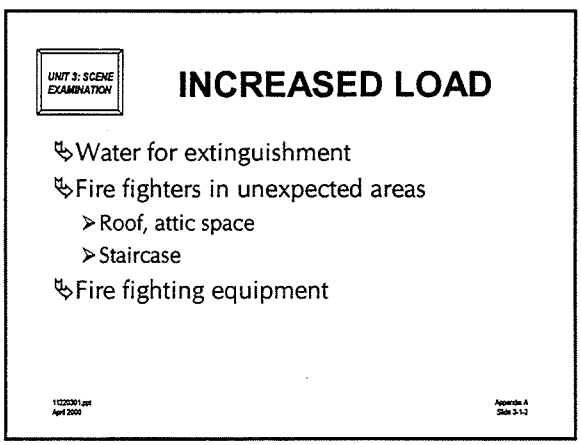
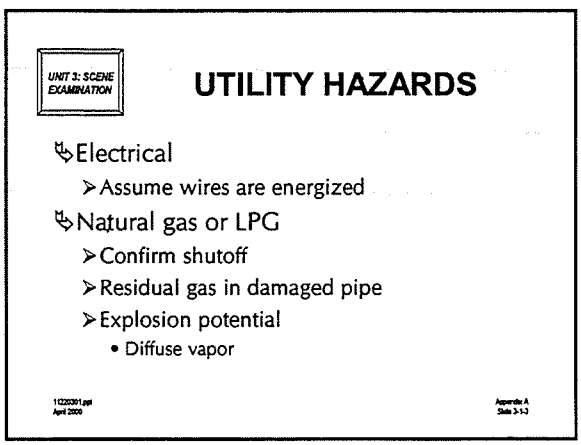

UNIT 2: MOTIVES
EXTREMIST
❖Committed to further a social, political, or religious cause
◆Terrorism, discrimination, riots/civil disturbance, hate crimes
❖Intimidation through fear
❖Destruction of property

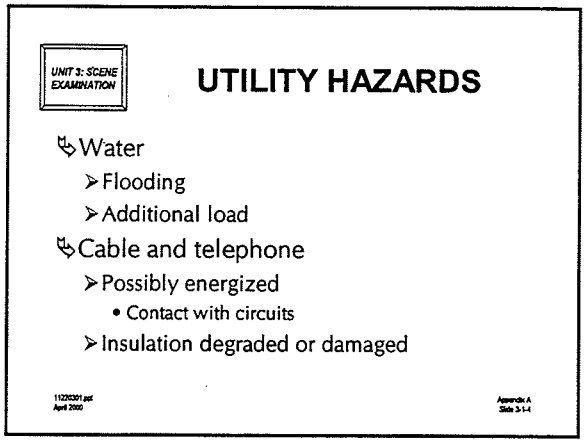

UNIT 2: MOTIVES
TARGETED PROPERTY
❖Can provide insight into the motivation
◆Abortion clinics (right-to-life)
◆Animal rights
◆Businesses with labor problems
◆Religious buildings
◆Political
◆Sex oriented

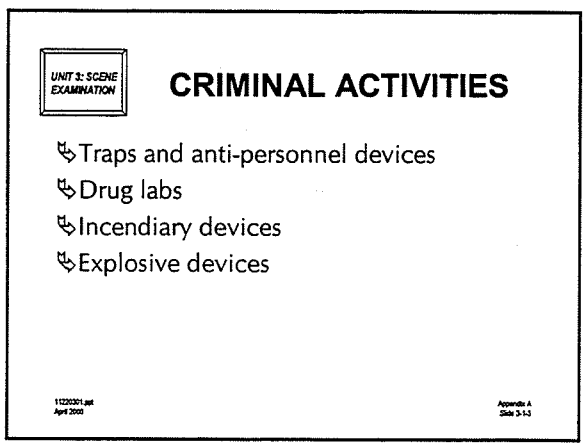

UNIT 2: MOTIVES
FIRE SCENE INDICATORS
❖Organized attack
❖Multiple offenders
❖Fire bombs
❖Messages, symbols, or literature
❖Media contact claiming responsibility
❖Large amounts of flammable liquid
❖Unexploded devices

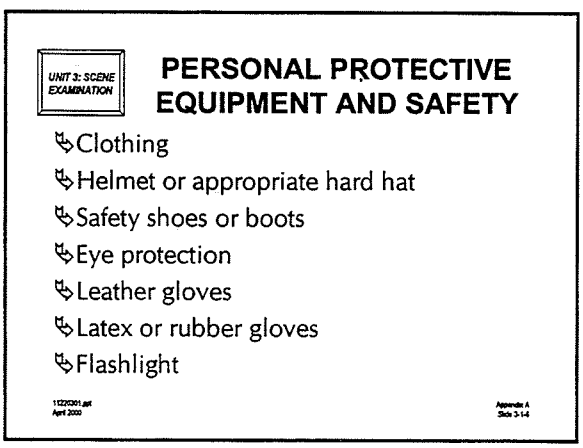

UNIT 3: SCENE EXAMINATION
STRUCTURE COLLAPSE AND STABILITY
Damaged structural support
Wood beams and joists
Brick
Steel
Damaged structural components
Roof
Floor and walls
1122D01.ppt
April 2000
Appendix A
Slide 3-1-1


UNIT 3: SCENE EXAMINATION
INCREASED LOAD
Water for extinguishment
Fire fighters in unexpected areas
Roof, attic space
Staircase
Fire fighting equipment
1122D01.ppt
April 2000
Appendix A
Slide 3-1-2


UNIT 3: SCENE EXAMINATION
UTILITY HAZARDS
Electrical
Assume wires are energized
Natural gas or LPG
Confirm shutoff
Residual gas in damaged pipe
Explosion potential
Diffuse vapor
1122D01.ppt
April 2000
Appendix A
Slide 3-1-3


UNIT 3: SCENE EXAMINATION
UTILITY HAZARDS
Water
Flooding
Additional load
Cable and telephone
Possibly energized
Contact with circuits
Insulation degraded or damaged
1122030.ppt
April 2000
Appendix A
Slide 3-14


UNIT 3: SCENE EXAMINATION
CRIMINAL ACTIVITIES
Traps and anti-personnel devices
Drug labs
Incendiary devices
Explosive devices
1122030.ppt
April 2000
Appendix A
Slide 3-13


UNIT 3: SCENE EXAMINATION
PERSONAL PROTECTIVE EQUIPMENT AND SAFETY
Clothing
Helmet or appropriate hard hat
Safety shoes or boots
Eye protection
Leather gloves
Latex or rubber gloves
Flashlight
1122030.ppt
April 2000
Appendix A
Slide 3-14

UNIT 3: SCENE EXAMINATION

RESPIRATORY PROTECTION

- Filter mask
  - Single membrane/paper
  - Half face mask (mouth/nose) with cartridges
  - Full face mask with cartridges
- Self-Contained Breathing Apparatus
  - Must be trained

1122030 1.ppt April 2000 Appendix A Slide 3-1-7

UNIT 3: SCENE EXAMINATION

PASS

PERSONAL ALERT SAFETY SYSTEM

- Worn in hazardous environments
- Locate injured or trapped
- Work with partner
- Radio communication

1122030 1.ppt April 2000 Appendix A Slide 3-1-8

UNIT 3: SCENE EXAMINATION

INVESTIGATIVE EQUIPMENT

- Lights
- Ladders
- Power tools
- Shoring/bracing material
- Monitoring devices
- Ventilation equipment
- Safety line or net
- Hand tools
- Decon supplies

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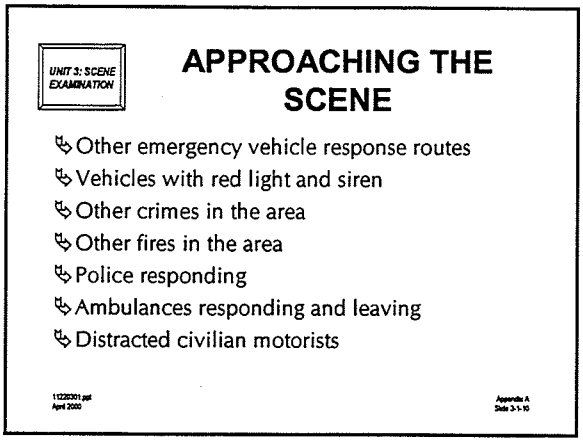
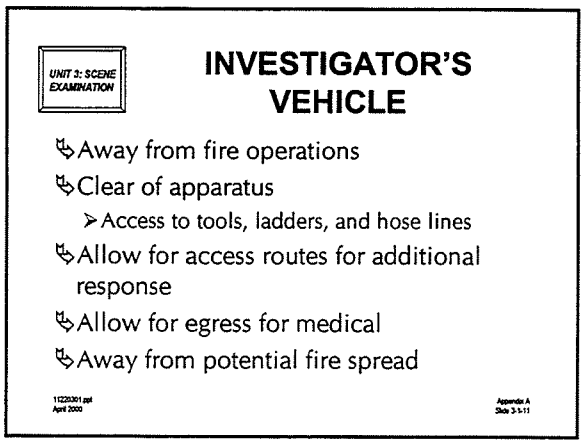
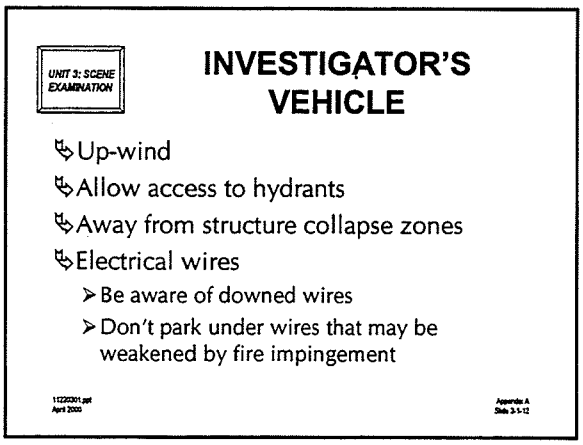

UNIT 3: SCENE EXAMINATION
APPROACHING THE SCENE
Other emergency vehicle response routes
Vehicles with red light and siren
Other crimes in the area
Other fires in the area
Police responding
Ambulances responding and leaving
Distracted civilian motorists
1122301.ppt
April 2000
Appendix A
Slide 3-1-10


UNIT 3: SCENE EXAMINATION
INVESTIGATOR'S VEHICLE
Away from fire operations
Clear of apparatus
Access to tools, ladders, and hose lines
Allow for access routes for additional response
Allow for egress for medical
Away from potential fire spread
1122301.ppt
April 2000
Appendix A
Slide 3-1-11


UNIT 3: SCENE EXAMINATION
INVESTIGATOR'S VEHICLE
Up-wind
Allow access to hydrants
Away from structure collapse zones
Electrical wires
Be aware of downed wires
Don't park under wires that may be weakened by fire impingement
1122301.ppt
April 2000
Appendix A
Slide 3-1-12

UNIT 3: SCENE EXAMINATION

STATUS OF OPERATIONS

- Suppression activities
- Overhaul activities
- Fire protection equipment

1122O301.ppt
April 2000
Appendix A
Slide 3-1-13

UNIT 3: SCENE EXAMINATION

STATUS OF STRUCTURE

- Extinguished
  - Confined and controlled
- Rekindle potential
- Collapsed areas
  - Actual
  - Potential
- Hazardous materials

1122O301.ppt
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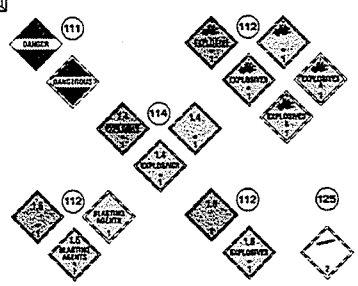
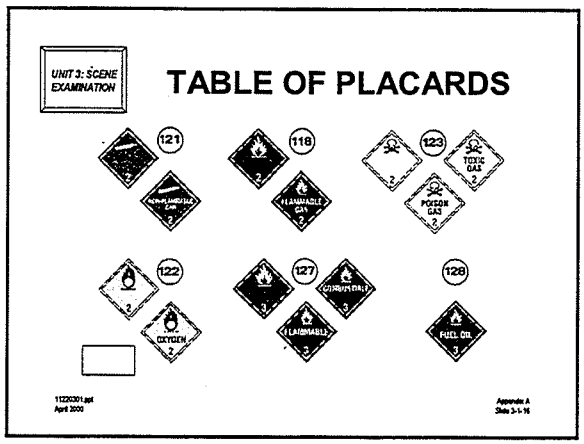
Appendix A
Slide 3-1-14

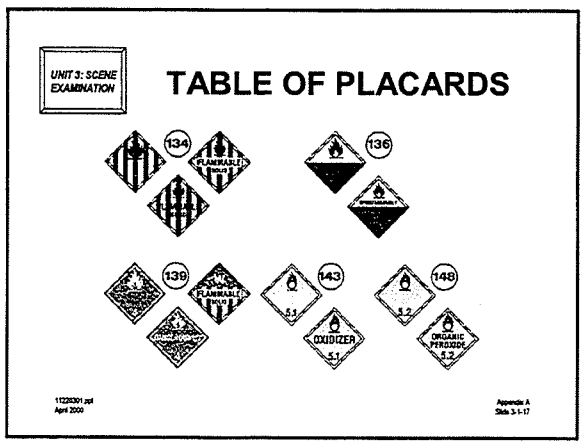
UNIT 3: SCENE EXAMINATION

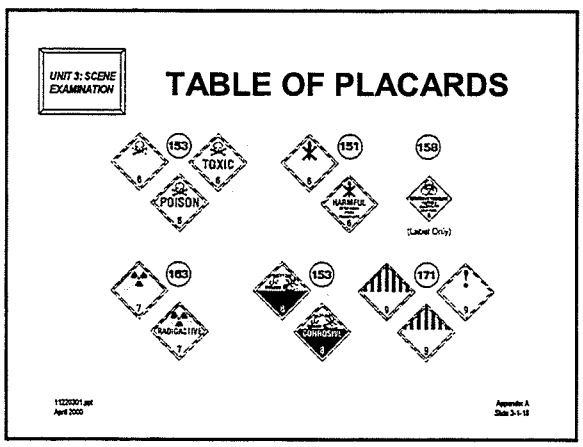
TABLE OF PLACARDS



1122O301.ppt
April 2000
Appendix A
Slide 3-1-15


UNIT 3: SCENE EXAMINATION
TABLE OF PLACARDS
121
118
123
122
127
128
OXYGEN
FUEL OIL


UNIT 3: SCENE EXAMINATION
TABLE OF PLACARDS
134
136
139
143
148
OXIDIZER
ORGANIC PEROXIDE


UNIT 3: SCENE EXAMINATION
TABLE OF PLACARDS
153
TOXIC
POISON
151
HARMFUL
158
163
RADIOACTIVE
153
CORROSIVE
171

UNIT 3: SCENE EXAMINATION

ASSISTANCE AT SCENE

- Best done with two investigators
  - Assist if one is trapped or injured
- If done alone, notify
  - Supervisor
  - Communications center
- Carry radio and cellular phone

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April 2000
Appendix A
Slide 3-1-19

UNIT 3: SCENE EXAMINATION

ENTERING A BURNING BUILDING

- Protective equipment must be worn
- SCBA for hazardous environments
- Accompanied by suppression personnel
- Know egress routes

1122030.ppt
April 2000
Appendix A
Slide 3-1-20

UNIT 3: SCENE EXAMINATION

UTILITY HAZARDS

MUST BE MITIGATED

- Electric service
- Gas
- Water shutoff

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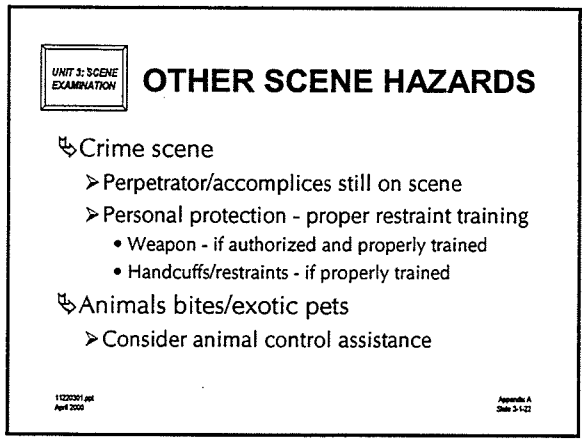
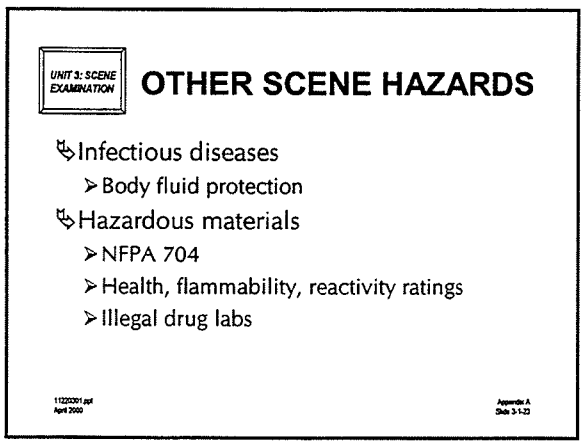
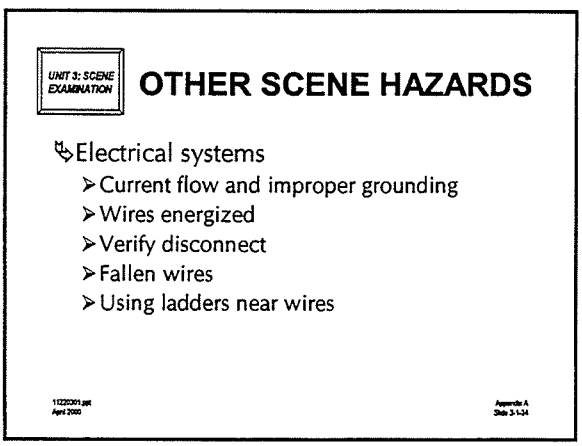
April 2000
Appendix A
Slide 3-1-21


UNIT 3: SCENE EXAMINATION
OTHER SCENE HAZARDS
Crime scene
Perpetrator/accomplices still on scene
Personal protection - proper restraint training
Weapon - if authorized and properly trained
Handcuffs/restraints - if properly trained
Animals bites/exotic pets
Consider animal control assistance
1122001.ppt
April 2000
Appendix A
Slide 3-1-22


UNIT 3: SCENE EXAMINATION
OTHER SCENE HAZARDS
Infectious diseases
Body fluid protection
Hazardous materials
NFPA 704
Health, flammability, reactivity ratings
Illegal drug labs
1122001.ppt
April 2000
Appendix A
Slide 3-1-23


UNIT 3: SCENE EXAMINATION
OTHER SCENE HAZARDS
Electrical systems
Current flow and improper grounding
Wires energized
Verify disconnect
Fallen wires
Using ladders near wires
1122001.ppt
April 2000
Appendix A
Slide 3-1-24

UNIT 3: SCENE EXAMINATION

OTHER SCENE HAZARDS

- Electrical systems
  - Walking through standing water
  - More than one electrical source
  - Nonconforming wire installation
  - Extension cords from other buildings

1122K301.ppt
April 2000
Appendix A
Slide 3-1-25

UNIT 3: SCENE EXAMINATION

OTHER SCENE HAZARDS

- Investigator fatigue
  - Adversely affects performance
  - Prone to accidents
  - Use periodic rest periods
  - Fluid replacement
  - Nourishment

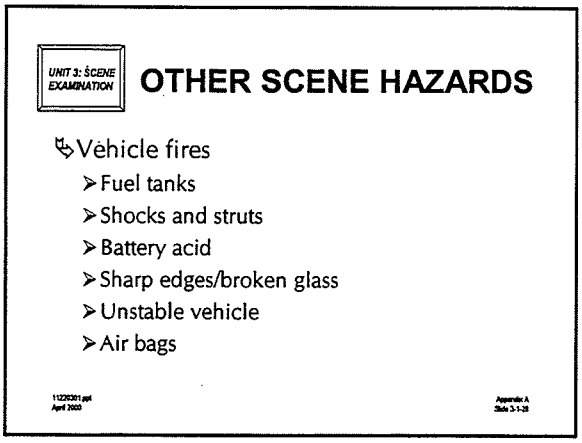
1122K301.ppt
April 2000
Appendix A
Slide 3-1-26

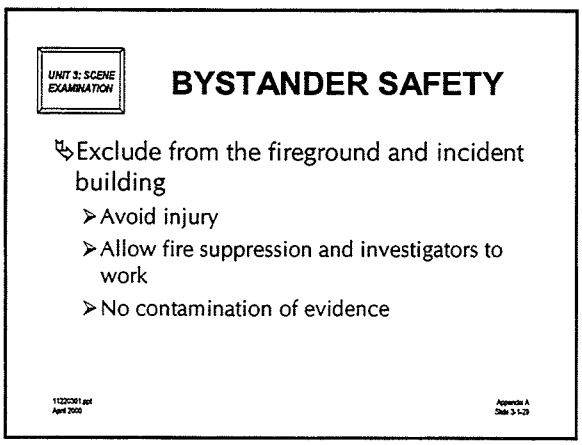
UNIT 3: SCENE EXAMINATION

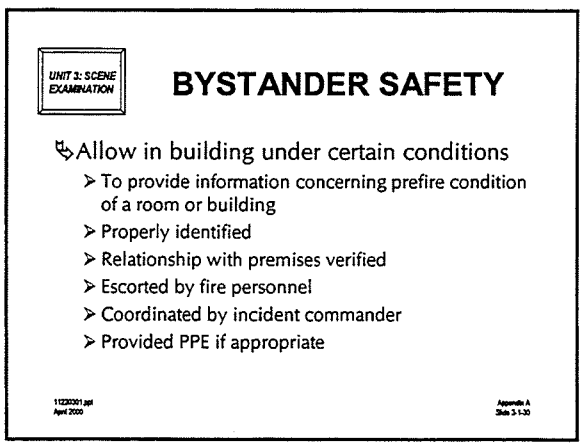
OTHER SCENE HAZARDS

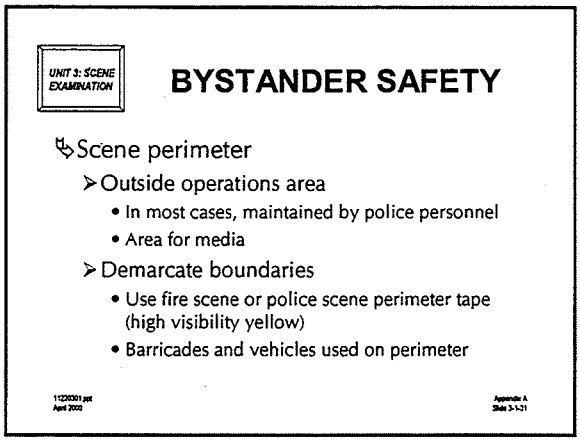
- Wildland fires
  - Heavy equipment (dozers)
  - Aircraft
  - Animals
  - Trees, logs, rocks
  - Poisonous plants
  - Wind shift
  - Changes in the fire

1122K301.ppt
April 2000
Appendix A
Slide 3-1-27


UNIT 3: SCENE EXAMINATION
OTHER SCENE HAZARDS
Vehicle fires
Fuel tanks
Shocks and struts
Battery acid
Sharp edges/broken glass
Unstable vehicle
Air bags


UNIT 3: SCENE EXAMINATION
BYSTANDER SAFETY
Exclude from the fireground and incident building
Avoid injury
Allow fire suppression and investigators to work
No contamination of evidence


UNIT 3: SCENE EXAMINATION
BYSTANDER SAFETY
Allow in building under certain conditions
To provide information concerning prefire condition of a room or building
Properly identified
Relationship with premises verified
Escorted by fire personnel
Coordinated by incident commander
Provided PPE if appropriate


UNIT 3: SCENE EXAMINATION
BYSTANDER SAFETY
Scene perimeter
Outside operations area
• In most cases, maintained by police personnel
• Area for media
Demarcate boundaries
• Use fire scene or police scene perimeter tape (high visibility yellow)
• Barricades and vehicles used on perimeter

UNIT 3: SCENE EXAMINATION

INTRODUCTION

- Investigation is similar to processing a fire scene
- May be accidental or deliberate
- Any determinations cannot be made until investigation is well underway
- Investigator safety is paramount

1122002.ppt
April 2000

Appendix A
Slide 3-3-1

UNIT 3: SCENE EXAMINATION

INTRODUCTION

All explosion scenes should be treated as though they are bombing scenes until determined otherwise

1122002.ppt
April 2000

Appendix A
Slide 3-3-2

UNIT 3: SCENE EXAMINATION

AGENCIES INVOLVED

- Local law enforcement
- Fire service
- Local bomb squads
- CDF/Office of State Fire Marshal
  - Arson-Bomb Unit
- Federal Bureau of Investigation
- Bureau of Alcohol, Tobacco & Firearms

1122002.ppt
April 2000

Appendix A
Slide 3-3-3

UNIT 3: SCENE EXAMINATION

AGENCIES INVOLVED

- U.S. Postal Inspection Service
- Allied Agencies
  - EMS
  - Coroner/medical examiner
  - Military EOD (Explosive Ordnance Disposal)
  - Explosive detector canines
  - USAR (Urban Search & Rescue Teams)
  - Public works
  - Building department engineers & inspectors

1122030Z.ppt
April 2000
Appendix A
Slide 3-2-4

UNIT 3: SCENE EXAMINATION

INHERENT DANGERS

- Secondary devices
- Unexploded devices or explosives
- Other boobytraps
- Damaged infrastructure
- Hazardous materials releases
- Biological hazards

1122030Z.ppt
April 2000
Appendix A
Slide 3-2-5

UNIT 3: SCENE EXAMINATION

TYPES OF EXPLOSIONS

- High explosives
- Low explosives
- Mechanical
- Chemical
- Diffuse vapor/combustion
- Nuclear

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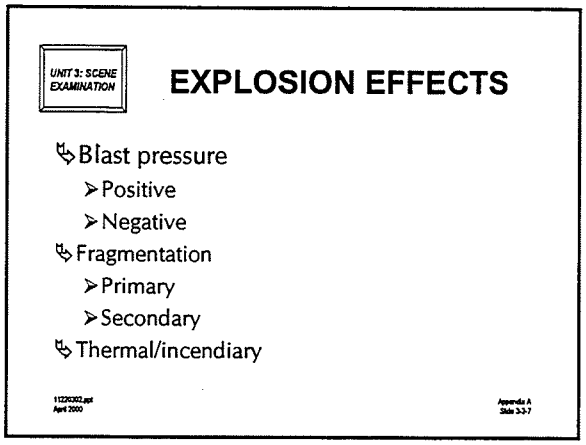
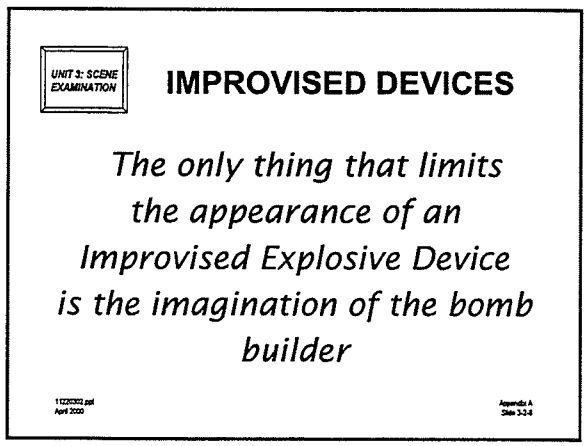
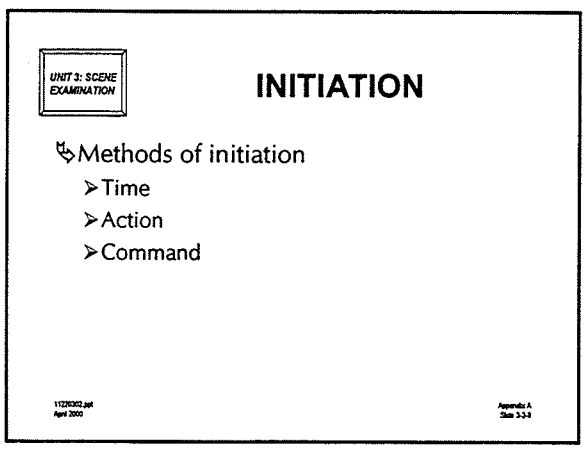
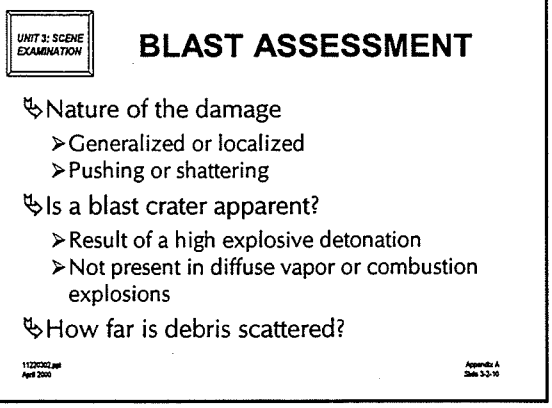
Appendix A
Slide 3-2-6


UNIT 3: SCENE EXAMINATION
EXPLOSION EFFECTS
Blast pressure
Positive
Negative
Fragmentation
Primary
Secondary
Thermal/incendiary


UNIT 3: SCENE EXAMINATION
IMPROVISED DEVICES
The only thing that limits the appearance of an Improvised Explosive Device is the imagination of the bomb builder


UNIT 3: SCENE EXAMINATION
INITIATION
Methods of initiation
Time
Action
Command


UNIT 3: SCENE EXAMINATION
BLAST ASSESSMENT
Nature of the damage
Generalized or localized
Pushing or shattering
Is a blast crater apparent?
Result of a high explosive detonation
Not present in diffuse vapor or combustion explosions
How far is debris scattered?
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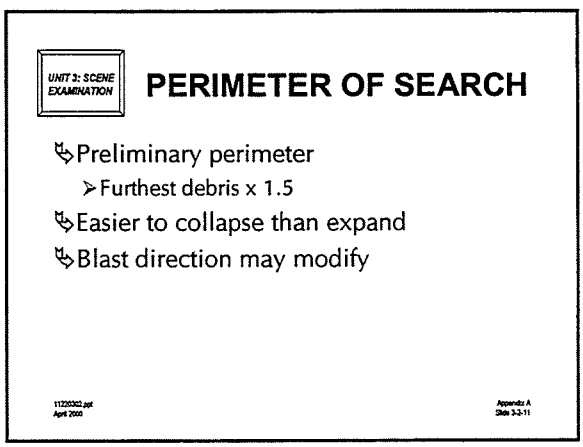
Appendix A
Slide 3-3-10


UNIT 3: SCENE EXAMINATION
PERIMETER OF SEARCH
Preliminary perimeter
Furthest debris x 1.5
Easier to collapse than expand
Blast direction may modify
1122030.ppt
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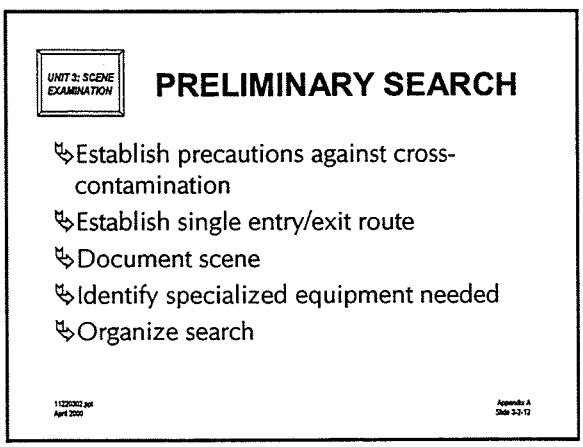
Appendix A
Slide 3-3-11


UNIT 3: SCENE EXAMINATION
PRELIMINARY SEARCH
Establish precautions against cross-contamination
Establish single entry/exit route
Document scene
Identify specialized equipment needed
Organize search
1122030.ppt
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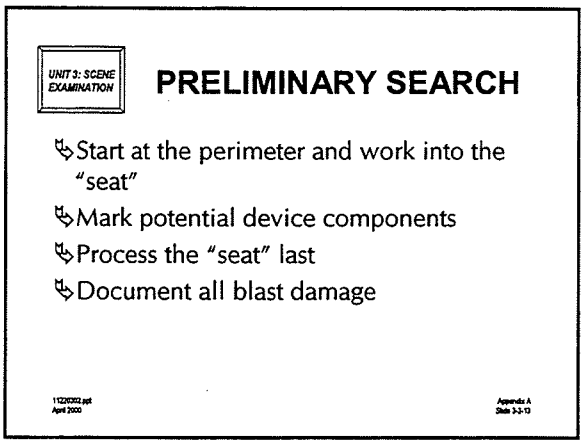
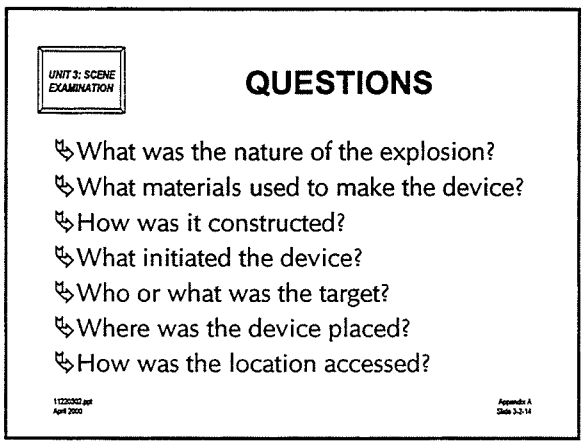
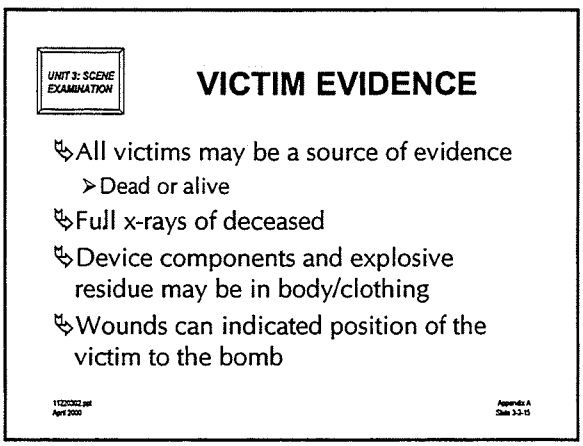
Appendix A
Slide 3-3-12


UNIT 3: SCENE EXAMINATION
PRELIMINARY SEARCH
Start at the perimeter and work into the "seat"
Mark potential device components
Process the "seat" last
Document all blast damage


UNIT 3: SCENE EXAMINATION
QUESTIONS
What was the nature of the explosion?
What materials used to make the device?
How was it constructed?
What initiated the device?
Who or what was the target?
Where was the device placed?
How was the location accessed?


UNIT 3: SCENE EXAMINATION
VICTIM EVIDENCE
All victims may be a source of evidence
Dead or alive
Full x-rays of deceased
Device components and explosive residue may be in body/clothing
Wounds can indicated position of the victim to the bomb

UNIT 4: EVIDENCE

FILM CAMERAS

- Adjustable
  - Best quality and versatility
  - 35mm
  - SLR
- Nonadjustable box
  - Not recommended
  - Polaroid - immediate results by expensive with limited versatility

1122004O1.ppt
April 2000
Appendix A
Slide A-1-1

UNIT 4: EVIDENCE

FLASH EQUIPMENT

- Necessity for fire environment
- Enough power for adequate exposure
- Automatic flash
  - Simplicity
  - Accuracy

1122004O1.ppt
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Appendix A
Slide A-1-2

UNIT 4: EVIDENCE

TAKING THE PICTURE

- Consider the entire picture
- Check area around object of interest
- Observe entire scene first
- Photograph undisturbed
- Check for background light

1122004O1.ppt
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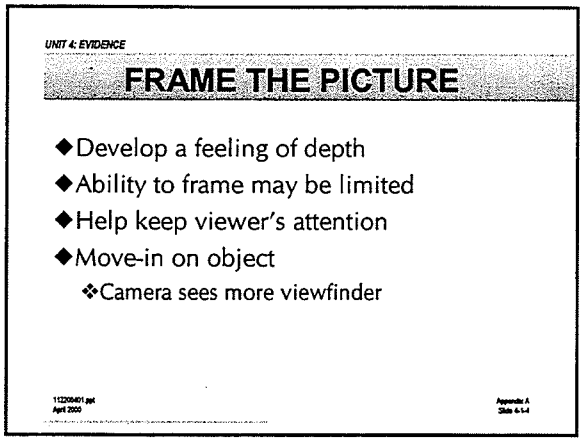
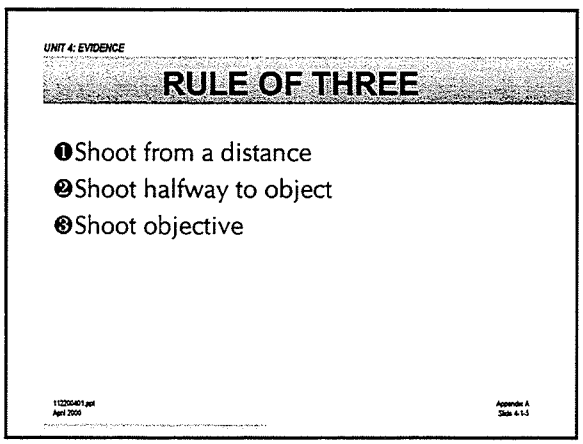
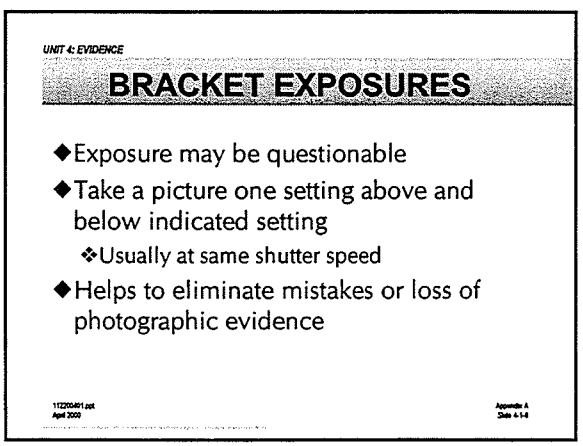
Appendix A
Slide A-1-3


UNIT 4: EVIDENCE
FRAME THE PICTURE
◆Develop a feeling of depth
◆Ability to frame may be limited
◆Help keep viewer's attention
◆Move-in on object
❖Camera sees more viewfinder


UNIT 4: EVIDENCE
RULE OF THREE
❶Shoot from a distance
❷Shoot halfway to object
❸Shoot objective


UNIT 4: EVIDENCE
BRACKET EXPOSURES
◆Exposure may be questionable
◆Take a picture one setting above and below indicated setting
❖Usually at same shutter speed
◆Helps to eliminate mistakes or loss of photographic evidence

UNIT 4: EVIDENCE

PHOTO DOCUMENTATION

- Case number
- Date
- Time
- Location
- Description of scene
- Photographer and/or investigator

1122000401.ppt
April 2000
Appendix A
Slide 4-1-7

UNIT 4: EVIDENCE

PRINT/NEGATIVE FILES

- Use separate file systems
- Negatives identified and stored in the case file
- Photographs identified and stored in proper size film envelopes

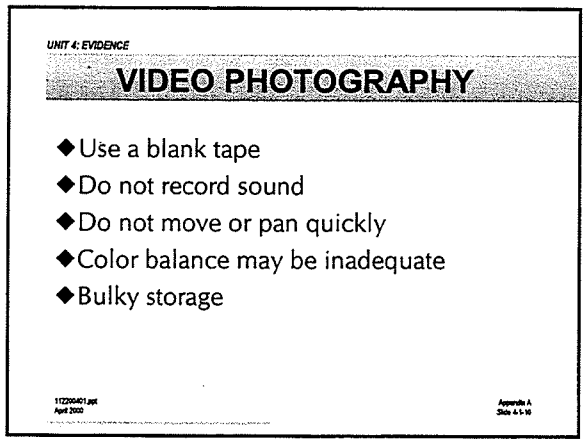
1122000401.ppt
April 2000
Appendix A
Slide 4-1-8

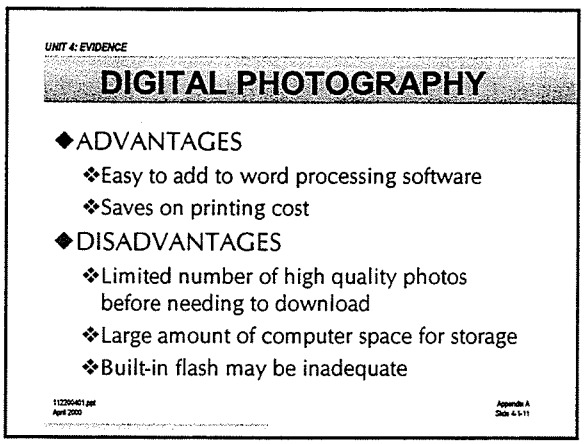
UNIT 4: EVIDENCE

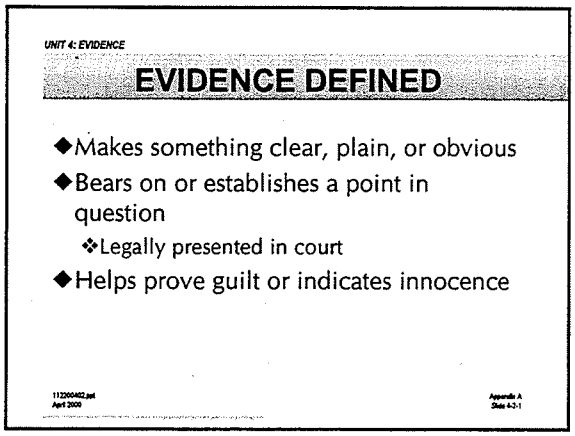
COURT USE

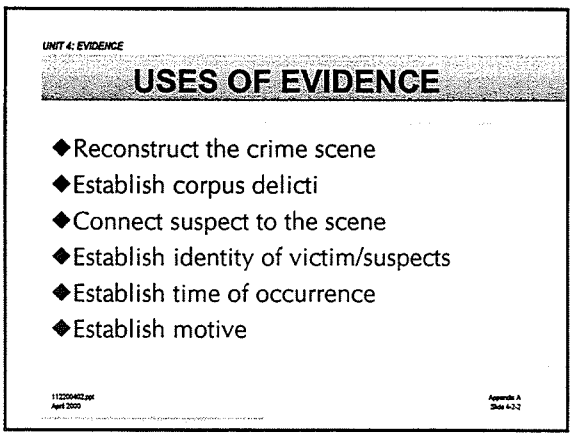
- PRINTS
  - Large enough for all jurors to see
- SLIDES
  - Check if allowed
  - May not want lights off
  - Hard to testify
  - May not have equipment or power

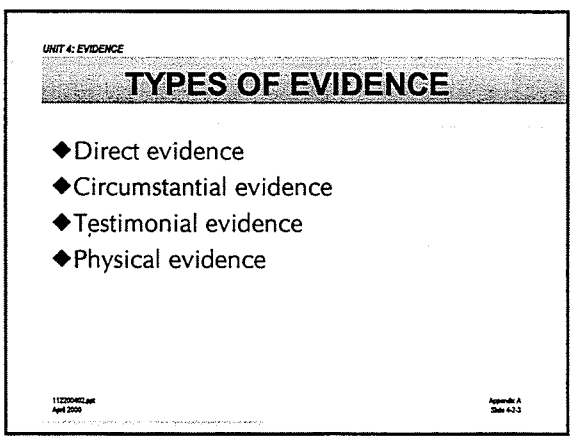
1122000401.ppt
April 2000
Appendix A
Slide 4-1-9

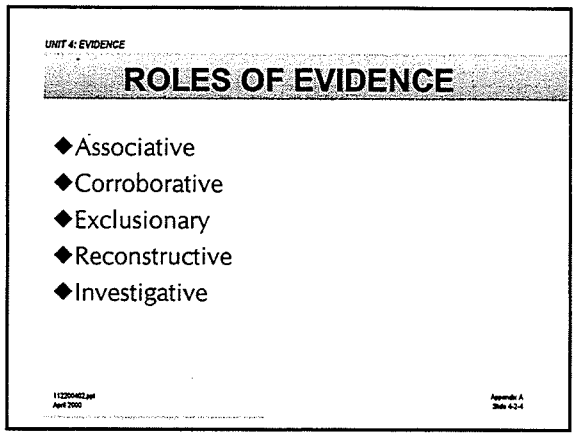

UNIT 4: EVIDENCE
VIDEO PHOTOGRAPHY
◆Use a blank tape
◆Do not record sound
◆Do not move or pan quickly
◆Color balance may be inadequate
◆Bulky storage

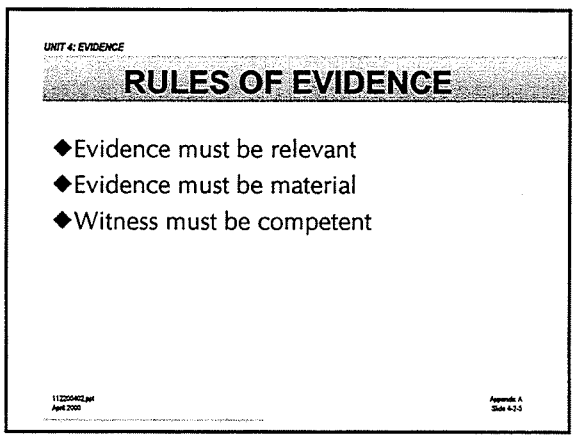

UNIT 4: EVIDENCE
DIGITAL PHOTOGRAPHY
◆ADVANTAGES
❖Easy to add to word processing software
❖Saves on printing cost
◆DISADVANTAGES
❖Limited number of high quality photos before needing to download
❖Large amount of computer space for storage
❖Built-in flash may be inadequate

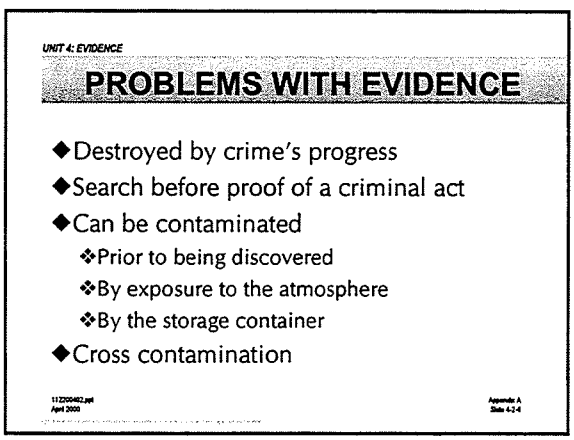

UNIT 4: EVIDENCE
EVIDENCE DEFINED
◆Makes something clear, plain, or obvious
◆Bears on or establishes a point in question
❖Legally presented in court
◆Helps prove guilt or indicates innocence


UNIT 4: EVIDENCE
USES OF EVIDENCE
◆Reconstruct the crime scene
◆Establish corpus delicti
◆Connect suspect to the scene
◆Establish identity of victim/suspects
◆Establish time of occurrence
◆Establish motive


UNIT 4: EVIDENCE
TYPES OF EVIDENCE
◆Direct evidence
◆Circumstantial evidence
◆Testimonial evidence
◆Physical evidence


UNIT 4: EVIDENCE
ROLES OF EVIDENCE
◆Associative
◆Corroborative
◆Exclusionary
◆Reconstructive
◆Investigative


UNIT 4: EVIDENCE
RULES OF EVIDENCE
◆Evidence must be relevant
◆Evidence must be material
◆Witness must be competent


UNIT 4: EVIDENCE
PROBLEMS WITH EVIDENCE
◆Destroyed by crime's progress
◆Search before proof of a criminal act
◆Can be contaminated
❖Prior to being discovered
❖By exposure to the atmosphere
❖By the storage container
◆Cross contamination

UNIT 4: EVIDENCE

EVIDENCE DOCUMENTATION

Once an object or a substance has been recognized as evidence, it must be properly documented and preserved if it is to remain valuable

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UNIT 4: EVIDENCE

PRIOR TO MOVING

- Determine nature the items under suspicion
- Photograph
- Record on proper form
- Identify item on the scene sketch
- Identify witness(es) who discovered item

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Slide 4-2-8

UNIT 4: EVIDENCE

REMOVING THE EVIDENCE

- Consider physical characteristics
  - Fragile
  - Temperature and time sensitive
  - Size and weight limitations
  - Liquid, solid, or gas
- Avoid additional damage
  - Record reasons if caused

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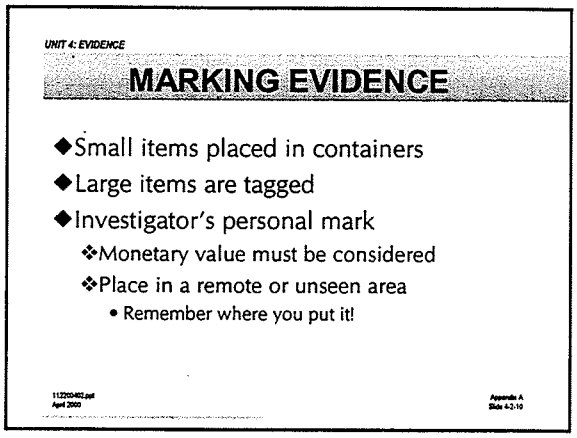
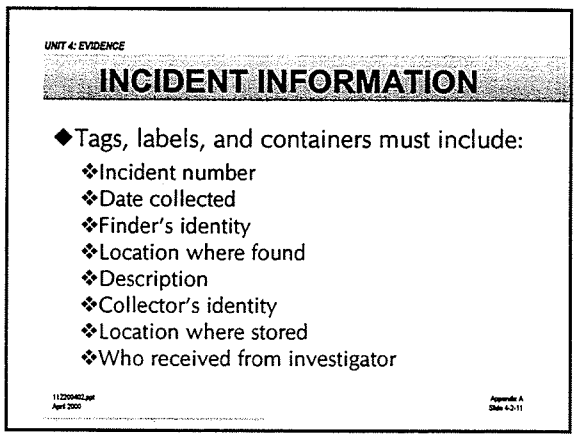
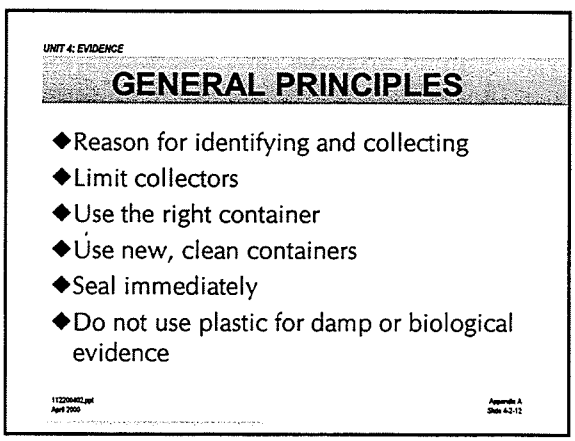

UNIT 4: EVIDENCE
MARKING EVIDENCE
◆Small items placed in containers
◆Large items are tagged
◆Investigator's personal mark
❖Monetary value must be considered
❖Place in a remote or unseen area
• Remember where you put it!


UNIT 4: EVIDENCE
INCIDENT INFORMATION
◆Tags, labels, and containers must include:
❖Incident number
❖Date collected
❖Finder's identity
❖Location where found
❖Description
❖Collector's identity
❖Location where stored
❖Who received from investigator


UNIT 4: EVIDENCE
GENERAL PRINCIPLES
◆Reason for identifying and collecting
◆Limit collectors
◆Use the right container
◆Use new, clean containers
◆Seal immediately
◆Do not use plastic for damp or biological evidence

UNIT 4: EVIDENCE

VOLATILE/FLAMMABLE LIQUIDS

- Plastic containers
- Glass containers
- Nylon or polyester bags
- Metal containers
- Aluminum foil

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UNIT 4: EVIDENCE

CHAIN OF EVIDENCE

- Proves the item is the same item recovered at the scene
- Documents everyone who had possession at any given time
- Records methods used to identify evidence and establish chain
- Break in chain may cause inadmissibility

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Appendix A
Slide 4-2-14

UNIT 4: EVIDENCE

EVIDENCE STORAGE

- Law enforcement agency usually best
- Investigator's office is last resort
- Cool, dry area to minimize deterioration
- Biological evidence should be kept FROZEN

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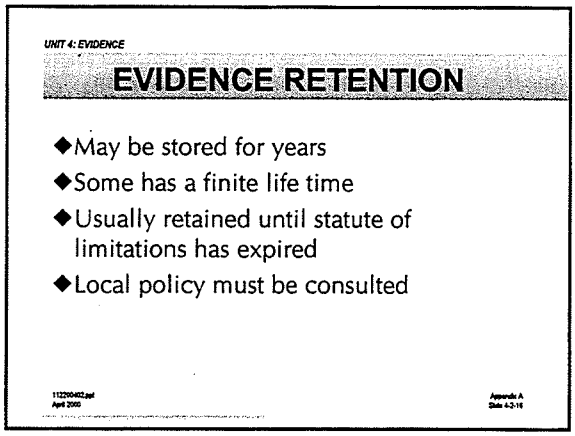
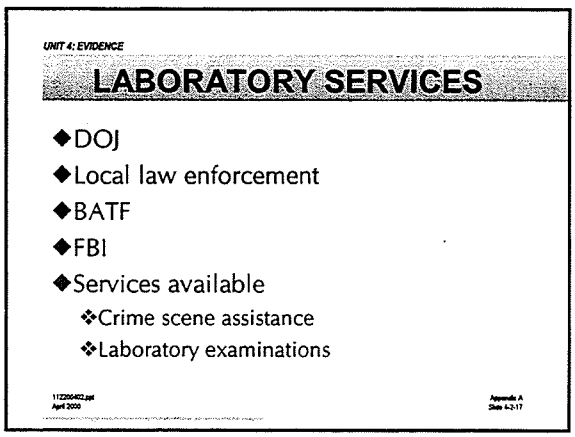
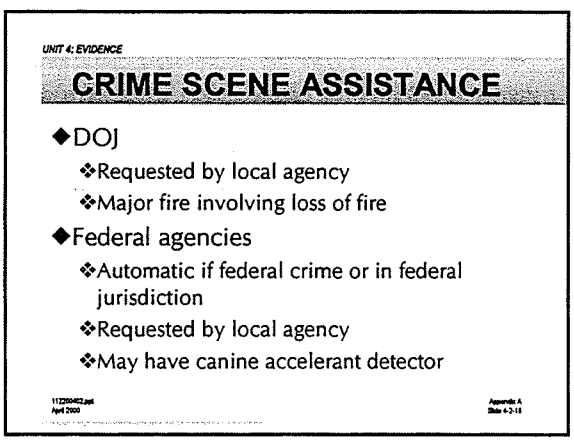
Slide 4-2-15


UNIT 4: EVIDENCE
EVIDENCE RETENTION
◆May be stored for years
◆Some has a finite life time
◆Usually retained until statute of limitations has expired
◆Local policy must be consulted


UNIT 4: EVIDENCE
LABORATORY SERVICES
◆DOJ
◆Local law enforcement
◆BATF
◆FBI
◆Services available
❖Crime scene assistance
❖Laboratory examinations


UNIT 4: EVIDENCE
CRIME SCENE ASSISTANCE
◆DOJ
❖Requested by local agency
❖Major fire involving loss of fire
◆Federal agencies
❖Automatic if federal crime or in federal jurisdiction
❖Requested by local agency
❖May have canine accelerant detector

UNIT 4: EVIDENCE

LABORATORY EXAMINATIONS

- Evidence must be properly packaged and delivered in person
- Include letter of transmittal or form
  - Type of offense
  - Names of suspects/victims
  - Agency submitting evidence
  - Investigator's name and telephone number
  - List of evidence
  - Specific examination desired
  - Note changes and alterations
  - Officer to receive report

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UNIT 4: EVIDENCE

TYPES OF EXAMINATIONS

- Microscopic exam
- Chemical tests
- Instrumental tests
  - Element content
  - Chemical structure

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Slide A-2-20

UNIT 4: EVIDENCE

OBTAINING SAMPLES

- Head space
- Steam distillation
- Solvent wash
- Carbon trapping
- Liquid

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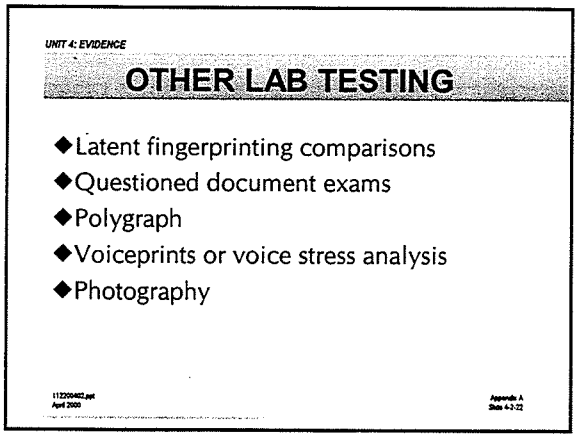
Slide A-2-21


UNIT 4: EVIDENCE
OTHER LAB TESTING
◆Latent fingerprinting comparisons
◆Questioned document exams
◆Polygraph
◆Voiceprints or voice stress analysis
◆Photography

UNIT 4: EVIDENCE

TRACE EVIDENCE DEFINED

Small to minute amount of evidence that is examined in the laboratory (by instrumentation) to either identify the material, to compare questioned and known specimens to determine a common origin, and to link suspect and victim to each other and to the scene

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UNIT 4: EVIDENCE

TRACE EVIDENCE

- Fingerprints
- Tool marks
- Footprints and tire track
- Synthetic fiber and hair
- Blood & body fluids
- Soil samples
- Glass
- Gun shot residue
- Flammable/combustible liquid
- Explosion residue
- Paint
- Grease, lubricants, and cosmetics

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Appendix A
Slide 4-3-2

UNIT 4: EVIDENCE

FINGERPRINTS

- Latent (invisible print)
  - Made visible and recoverable
- Patent (visible print)
  - Found after a fire as a visible print on object
  - Protect from damage
  - Photograph
- Plastic (impression print)
  - Found as a visible print in soft materials
  - Photograph in place and try to collect intact for lab processing

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UNIT 4: EVIDENCE

TOOL MARKS DEFINED

A tool mark is any impression, scratch, gouge, cut, or abrasion made when a tool is brought into contact with another object

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Slide 4-3-4

UNIT 4: EVIDENCE

TOOL MARKS

- Collection of evidence
  - Photograph in place
  - Collect tool
  - Collect impression without damage
  - Cast tool mark casting material similar to Mikrosil
- Never fit suspected tool into the impression
  - Will destroy the evidentiary value

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Appendix A
Slide 4-3-5

UNIT 4: EVIDENCE

FOOTPRINTS & TIRE TRACKS

- Impressions
- Prints (floors, glass, paper, doors)
- Collection of evidence
  - Sketch
  - Photograph with scale
  - Casting
  - Tires or shoes
  - Electrostatic dust lifting
- Vehicle track width and wheel base

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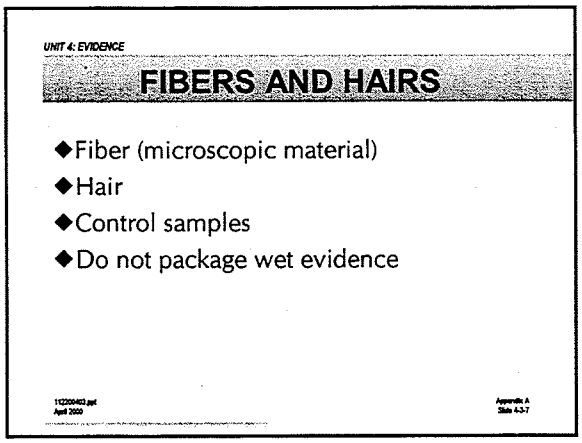
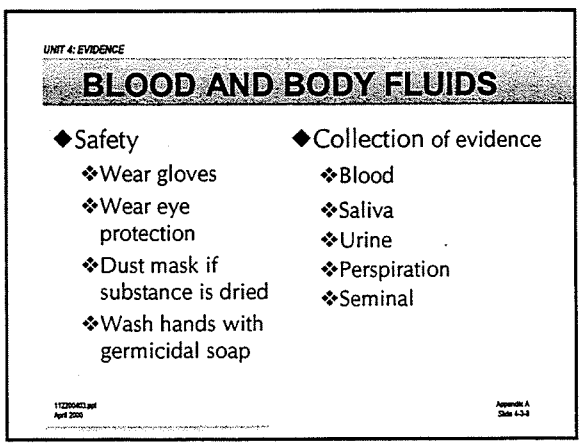
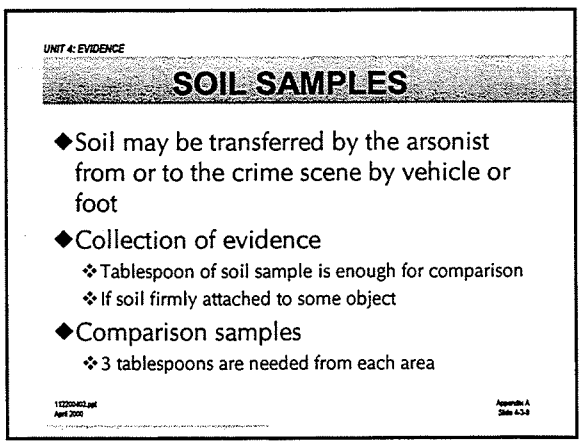
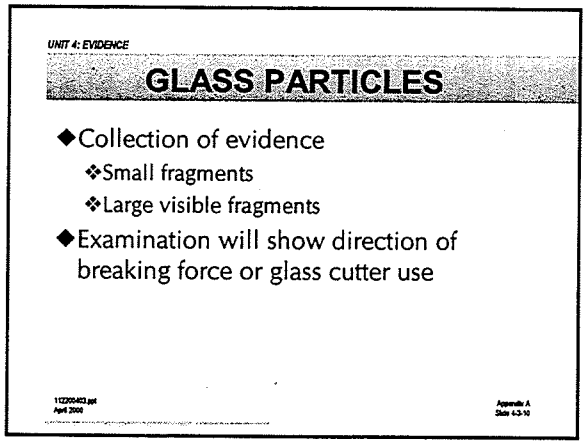
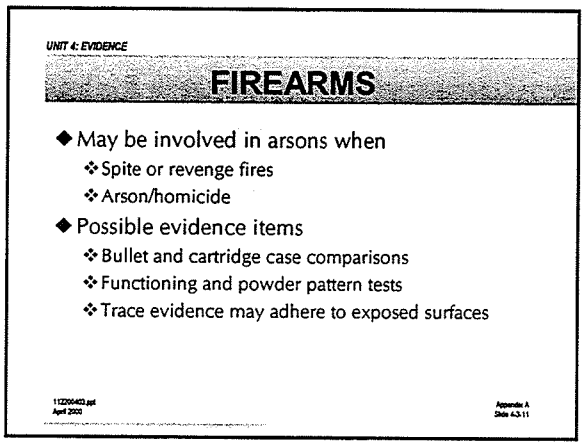
Slide 4-3-6

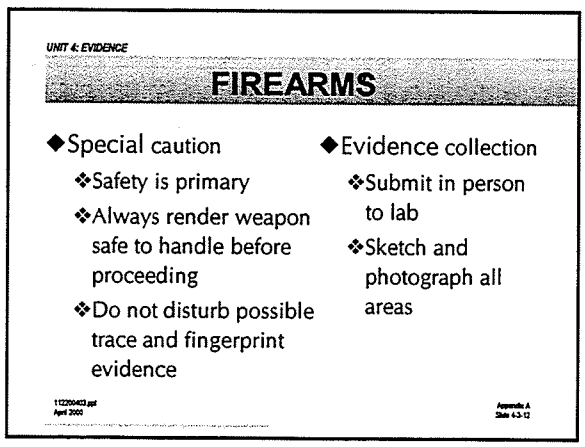

UNIT 4: EVIDENCE
FIBERS AND HAIRS
◆Fiber (microscopic material)
◆Hair
◆Control samples
◆Do not package wet evidence


UNIT 4: EVIDENCE
BLOOD AND BODY FLUIDS
◆Safety
❖Wear gloves
❖Wear eye protection
❖Dust mask if substance is dried
❖Wash hands with germicidal soap
◆Collection of evidence
❖Blood
❖Saliva
❖Urine
❖Perspiration
❖Seminal


UNIT 4: EVIDENCE
SOIL SAMPLES
◆Soil may be transferred by the arsonist from or to the crime scene by vehicle or foot
◆Collection of evidence
❖Tablespoon of soil sample is enough for comparison
❖If soil firmly attached to some object
◆Comparison samples
❖3 tablespoons are needed from each area


UNIT 4: EVIDENCE
GLASS PARTICLES
◆Collection of evidence
❖Small fragments
❖Large visible fragments
◆Examination will show direction of breaking force or glass cutter use


UNIT 4: EVIDENCE
FIREARMS
◆ May be involved in arsons when
❖ Spite or revenge fires
❖ Arson/homicide
◆ Possible evidence items
❖ Bullet and cartridge case comparisons
❖ Functioning and powder pattern tests
❖ Trace evidence may adhere to exposed surfaces


UNIT 4: EVIDENCE
FIREARMS
◆Special caution
❖Safety is primary
❖Always render weapon safe to handle before proceeding
❖Do not disturb possible trace and fingerprint evidence
◆Evidence collection
❖Submit in person to lab
❖Sketch and photograph all areas

UNIT 4: EVIDENCE

VOLATILE FLAMMABLES

- ◆May be encountered throughout fire scene as an accelerant
- ◆Evidence collection
  - ❖Collect in airtight containers
- ◆Laboratory testing
  - ❖Vacuum extraction method of obtaining excellent sample is current technique

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UNIT 4: EVIDENCE

EXPLOSIVE RESIDUE

- ◆May be found on
  - ❖Clothes
  - ❖Hands
  - ❖Soil samples

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Slide 4-3-14

UNIT 4: EVIDENCE

PAINT

- ◆Tools may leave or take paint
- ◆Recovery of samples
  - ❖All samples in separate containers
  - ❖Obtain all layers of paint

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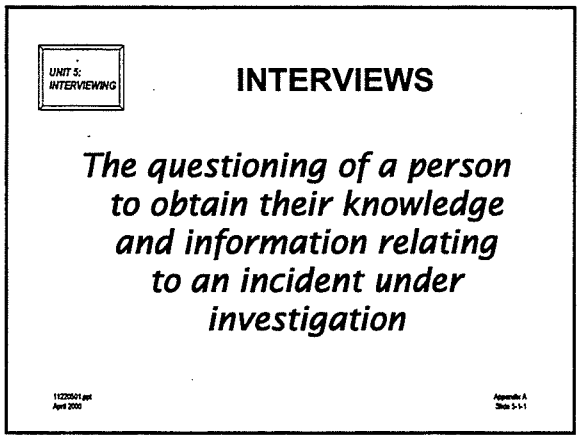
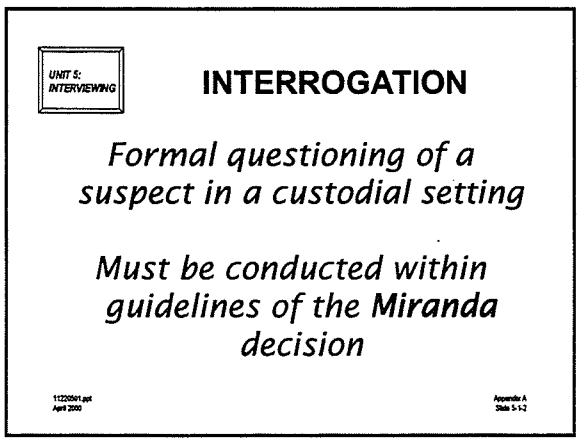
Slide 4-3-15


UNIT 5:
INTERVIEWING
INTERVIEWS
The questioning of a person to obtain their knowledge and information relating to an incident under investigation
1122051.ppt
April 2000
Appendix A
Slide 5-1-1


UNIT 5:
INTERVIEWING
INTERROGATION
Formal questioning of a suspect in a custodial setting
Must be conducted within guidelines of the Miranda decision
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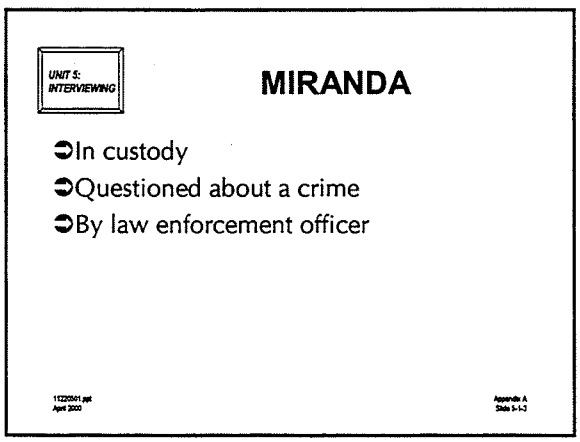
April 2000
Appendix A
Slide 5-1-2


UNIT 5:
INTERVIEWING
MIRANDA
In custody
Questioned about a crime
By law enforcement officer
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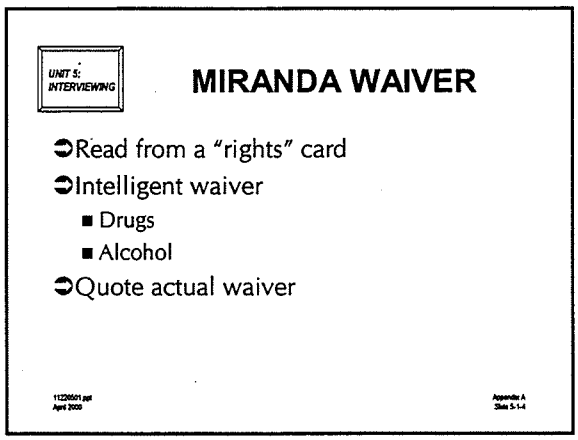
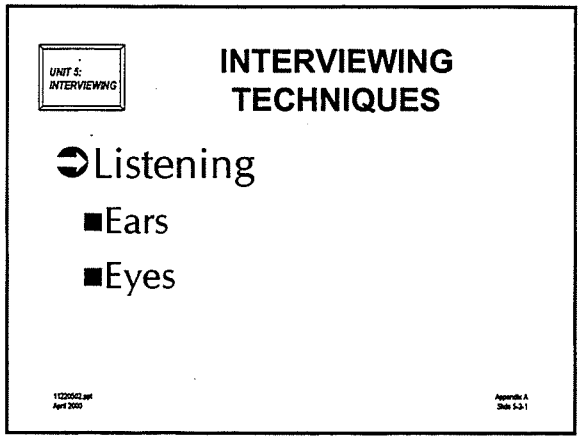
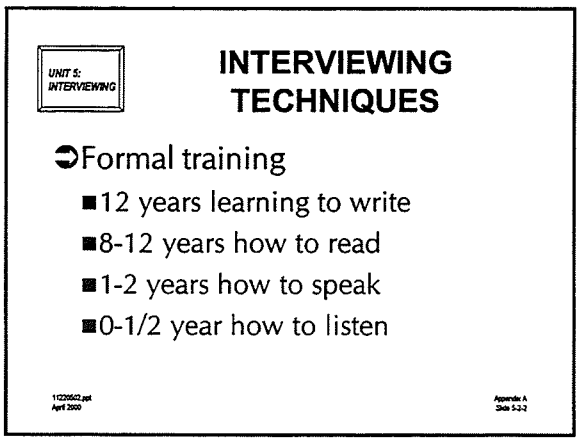
April 2000
Appendix A
Slide 5-1-3


UNIT 5: INTERVIEWING
MIRANDA WAIVER
Read from a "rights" card
Intelligent waiver
Drugs
Alcohol
Quote actual waiver


UNIT 5: INTERVIEWING
INTERVIEWING TECHNIQUES
Listening
Ears
Eyes
1122052.ppt
April 2000
Appendix A
Slide 5-3-1


UNIT 5: INTERVIEWING
INTERVIEWING TECHNIQUES
Formal training
12 years learning to write
8-12 years how to read
1-2 years how to speak
0-1/2 year how to listen
1122052.ppt
April 2000
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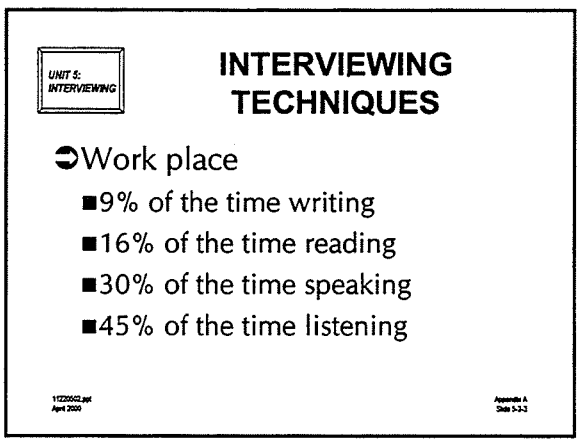
Slide 5-3-2


UNIT 5: INTERVIEWING
INTERVIEWING TECHNIQUES
Work place
9% of the time writing
16% of the time reading
30% of the time speaking
45% of the time listening
1122052.ppt
April 2000
Appendix A
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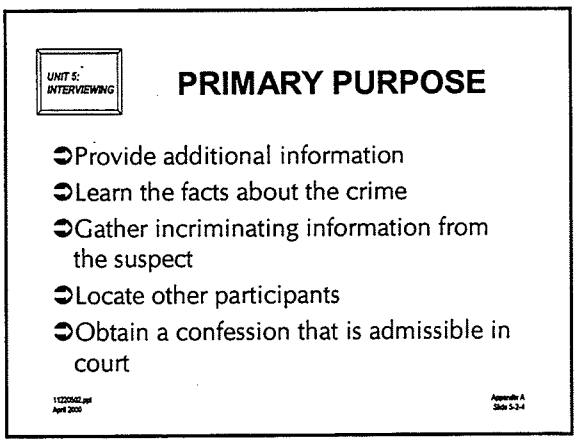
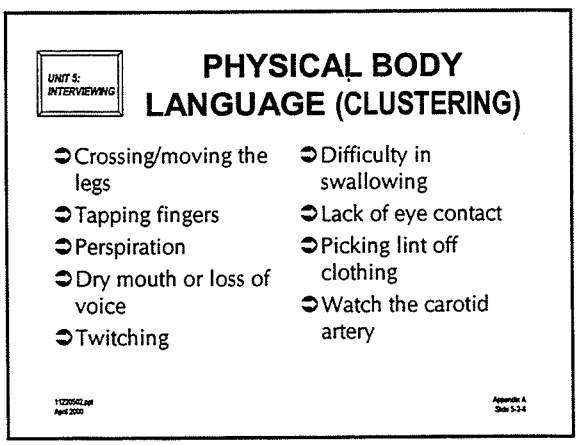

UNIT 5: INTERVIEWING
PRIMARY PURPOSE
Provide additional information
Learn the facts about the crime
Gather incriminating information from the suspect
Locate other participants
Obtain a confession that is admissible in court


UNIT 5: INTERVIEWING
INTERROGATOR'S QUALITIES
Prepare mentally
Avoid personality clash
Maintain business-like attitude
Guide and control the conversation
Neat appearance
Be professional
Be alert at all times
Establish trust
Maintain logical mind
Maintain self-control over emotions
Learn to play the "role"


UNIT 5: INTERVIEWING
PHYSICAL BODY LANGUAGE (CLUSTERING)
Crossing/moving the legs
Tapping fingers
Perspiration
Dry mouth or loss of voice
Twitching
Difficulty in swallowing
Lack of eye contact
Picking lint off clothing
Watch the carotid artery

VERBAL BODY LANGUAGE

- Long pause in answering "No"
- Answers "No" and then changes position
- "No" is given before you finish asking questions
- "To tell the truth" or "To be honest"
- Repeats your question back to you
- Stalls

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April 2000

Appendix A
Slide 5-3-7

INTERVIEWER ATTITUDE & CONDUCT

- Avoid the impression of seeking a confession
- Avoid use of a pencil, paper, and microphone
- Don't be in uniform if possible
- Avoid certain words such as "kill, steal, burn, arson, etc."

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April 2000

Appendix A
Slide 5-3-8

INTERVIEWER ATTITUDE & CONDUCT

- Maintain close eye-to-eye contact
- Remain close to the suspect physically
- Remain seated
- Speak on a language level equal to the suspect
- Treat the suspect with decency/respect

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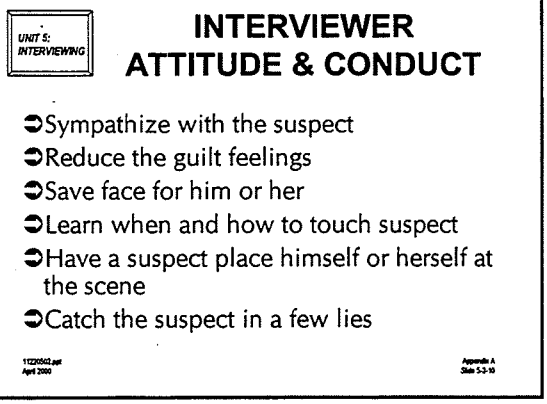
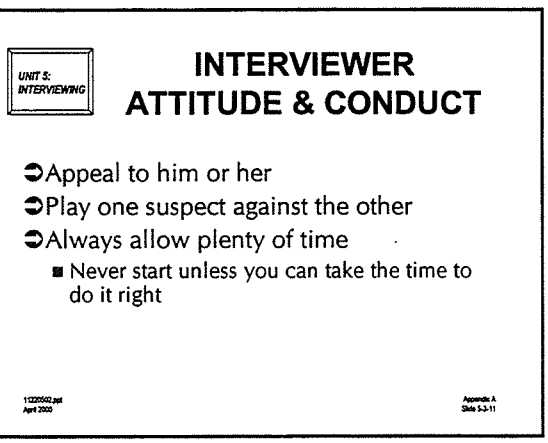
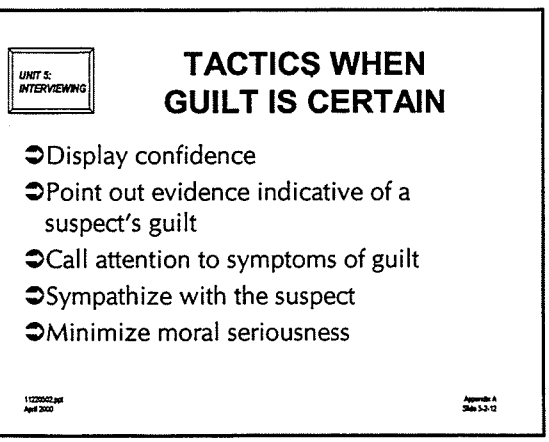
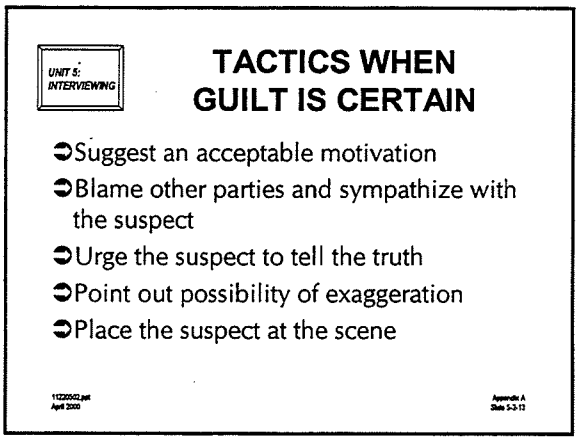
April 2000

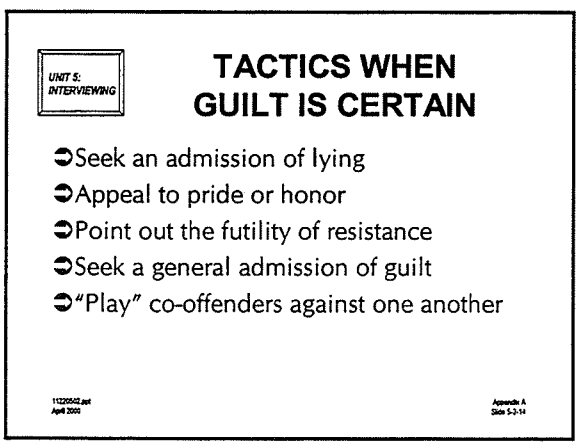
Appendix A
Slide 5-3-9

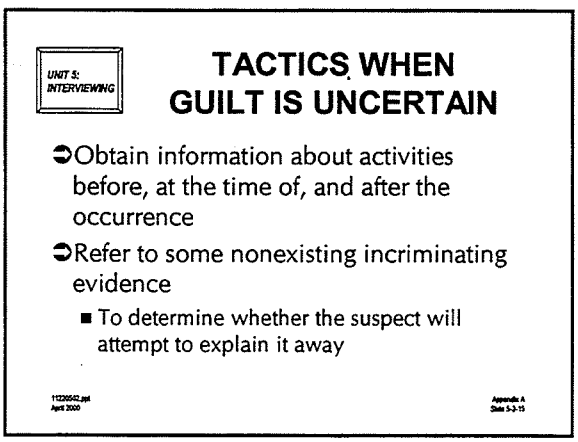

UNIT 5: INTERVIEWING
INTERVIEWER ATTITUDE & CONDUCT
Sympathize with the suspect
Reduce the guilt feelings
Save face for him or her
Learn when and how to touch suspect
Have a suspect place himself or herself at the scene
Catch the suspect in a few lies


UNIT 5: INTERVIEWING
INTERVIEWER ATTITUDE & CONDUCT
Appeal to him or her
Play one suspect against the other
Always allow plenty of time
Never start unless you can take the time to do it right


UNIT 5: INTERVIEWING
TACTICS WHEN GUILT IS CERTAIN
Display confidence
Point out evidence indicative of a suspect's guilt
Call attention to symptoms of guilt
Sympathize with the suspect
Minimize moral seriousness


UNIT 5: INTERVIEWING
TACTICS WHEN GUILT IS CERTAIN
Suggest an acceptable motivation
Blame other parties and sympathize with the suspect
Urge the suspect to tell the truth
Point out possibility of exaggeration
Place the suspect at the scene


UNIT 5: INTERVIEWING
TACTICS WHEN GUILT IS CERTAIN
Seek an admission of lying
Appeal to pride or honor
Point out the futility of resistance
Seek a general admission of guilt
"Play" co-offenders against one another


UNIT 5: INTERVIEWING
TACTICS WHEN GUILT IS UNCERTAIN
Obtain information about activities before, at the time of, and after the occurrence
Refer to some nonexisting incriminating evidence
To determine whether the suspect will attempt to explain it away

UNIT 5: INTERVIEWING

TACTICS WHEN GUILT IS UNCERTAIN

- If suspect offers to make restitution
- Ask suspect to take a polygraph test
  - Innocent person will almost always agree
  - Guilty person is prone to refuse or back out of commitment to take the test
  - "Last resort" and should not be used until all other avenues have been exhausted

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April 2000
Appendix A
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UNIT 5: INTERVIEWING

UNLAWFUL INTERVIEW TECHNIQUES

- Physical abuse
- Threats
- Promises

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April 2000
Appendix A
Slide 5-3-17

UNIT 5: INTERVIEWING

RETENTION OF NOTES AND TAPES

- Needed for courtroom use
- Defense makes a motion to discover all notes, reports, and tapes in the prosecution's case
- Case law makes retention of notes made during confessions mandatory

1122IS02.ppt
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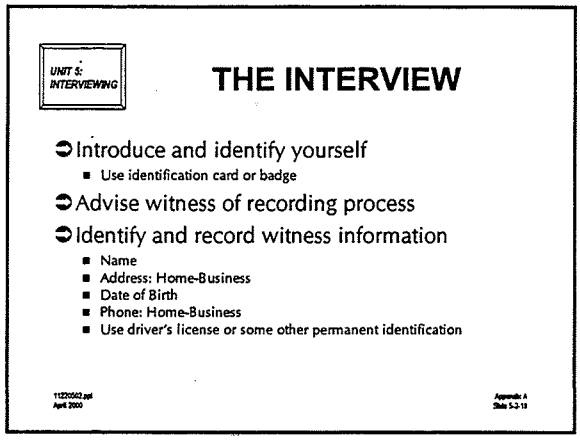
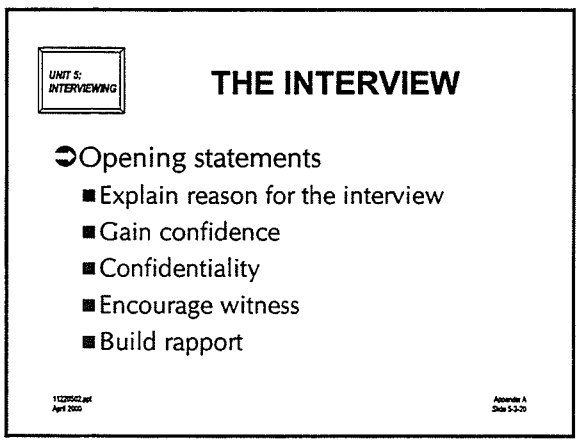
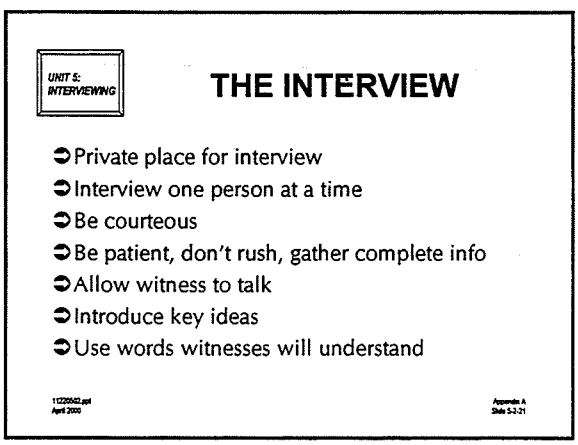
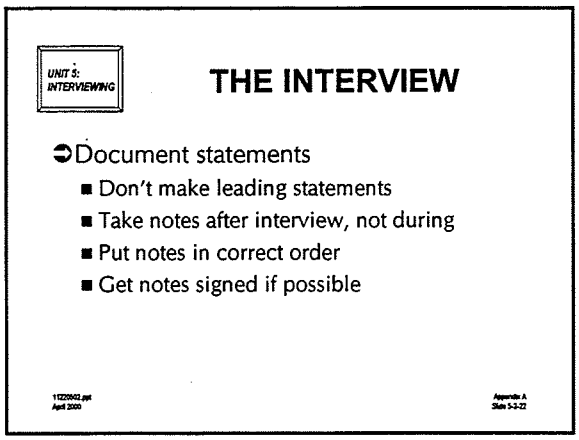
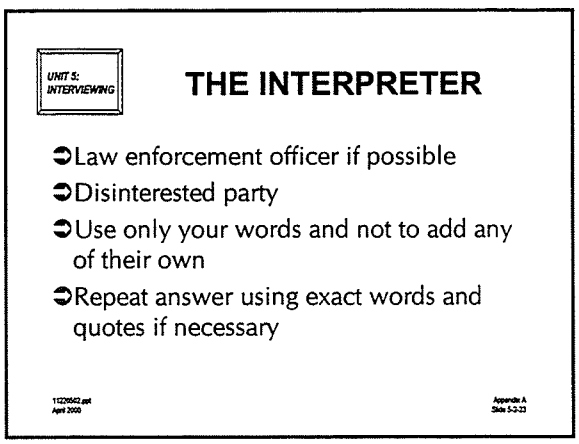
Appendix A
Slide 5-3-18

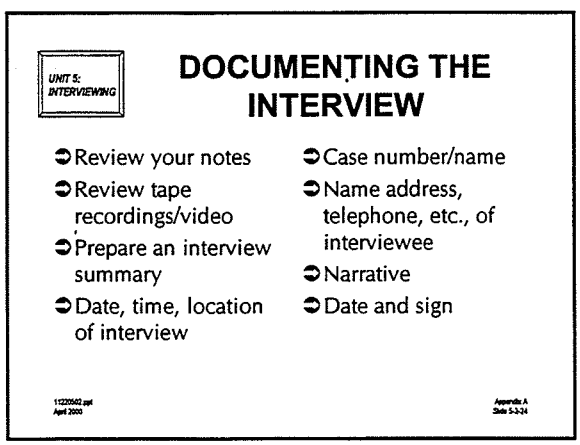

UNIT 5: INTERVIEWING
THE INTERVIEW
Introduce and identify yourself
Use identification card or badge
Advise witness of recording process
Identify and record witness information
Name
Address: Home-Business
Date of Birth
Phone: Home-Business
Use driver's license or some other permanent identification


UNIT 5: INTERVIEWING
THE INTERVIEW
Opening statements
Explain reason for the interview
Gain confidence
Confidentiality
Encourage witness
Build rapport


UNIT 5: INTERVIEWING
THE INTERVIEW
Private place for interview
Interview one person at a time
Be courteous
Be patient, don't rush, gather complete info
Allow witness to talk
Introduce key ideas
Use words witnesses will understand


UNIT 5: INTERVIEWING
THE INTERVIEW
Document statements
Don't make leading statements
Take notes after interview, not during
Put notes in correct order
Get notes signed if possible


UNIT 5: INTERVIEWING
THE INTERPRETER
Law enforcement officer if possible
Disinterested party
Use only your words and not to add any of their own
Repeat answer using exact words and quotes if necessary


UNIT 5: INTERVIEWING
DOCUMENTING THE INTERVIEW
Review your notes
Review tape recordings/video
Prepare an interview summary
Date, time, location of interview
Case number/name
Name address, telephone, etc., of interviewee
Narrative
Date and sign

VICTIM STABILIZATION

- Consider what victim/witness has been through
- Let them vent their emotions
- Be empathetic
- Choose words carefully
- Explain that their anxiety is natural
- Everything they say is important

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Appendix A
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BUILDING RAPPORT

- Be aware of your body language and choice of words
- Watch the witness's body language and other nonverbal clues
- Locate the interview so witness can concentrate without distractions
- Tell victims that you are sorry this has happened to them
- Thank the persons interviewed
- If the report file number is available, give it to the victim

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CONDUCTING THE INTERVIEW

- Don't interrupt
- Take notes sparingly
- Repeat words or phrases verbatim
- Treat the statement as if it is the only one you have
- Use open-ended questions
- Be specific about suspect's description

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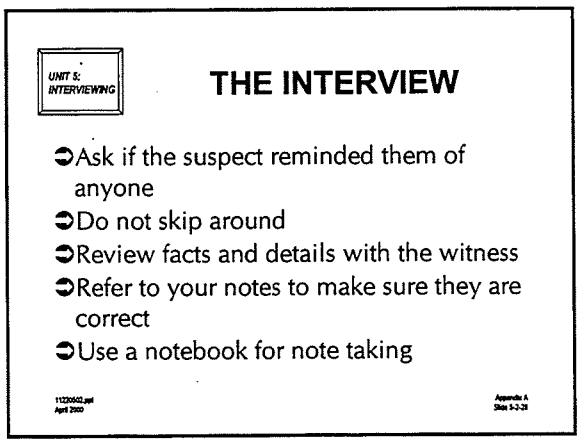
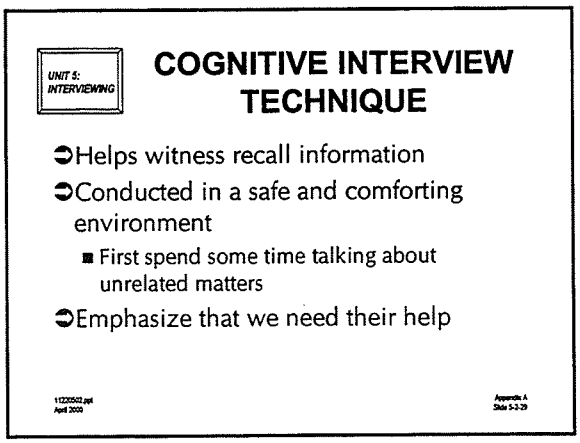
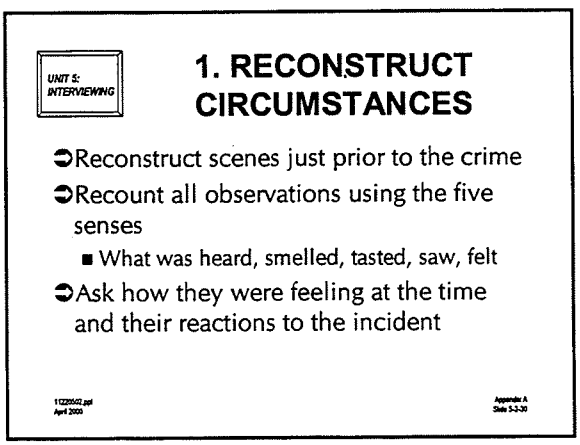
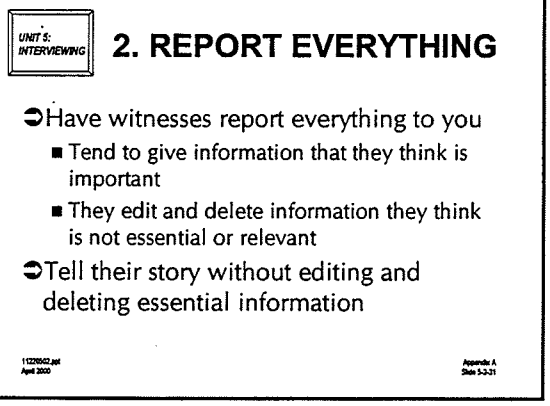

UNIT 5: INTERVIEWING
THE INTERVIEW
Ask if the suspect reminded them of anyone
Do not skip around
Review facts and details with the witness
Refer to your notes to make sure they are correct
Use a notebook for note taking


UNIT 5: INTERVIEWING
COGNITIVE INTERVIEW TECHNIQUE
Helps witness recall information
Conducted in a safe and comforting environment
First spend some time talking about unrelated matters
Emphasize that we need their help


UNIT 5: INTERVIEWING
1. RECONSTRUCT CIRCUMSTANCES
Reconstruct scenes just prior to the crime
Recount all observations using the five senses
What was heard, smelled, tasted, saw, felt
Ask how they were feeling at the time and their reactions to the incident


UNIT 5:
INTERVIEWING
2. REPORT EVERYTHING
Have witnesses report everything to you
Tend to give information that they think is important
They edit and delete information they think is not essential or relevant
Tell their story without editing and deleting essential information
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April 2000
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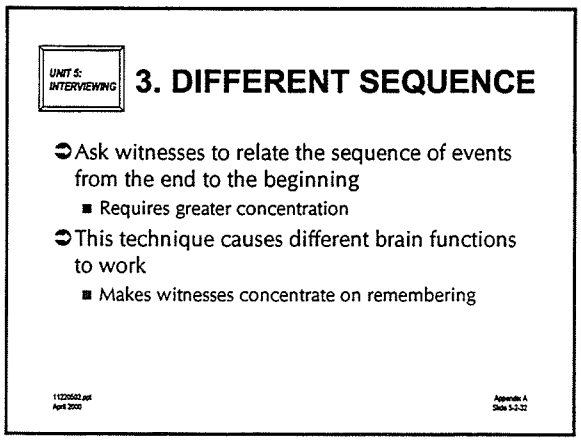
UNIT 5:
INTERVIEWING
3. DIFFERENT SEQUENCE
Ask witnesses to relate the sequence of events from the end to the beginning
Requires greater concentration
This technique causes different brain functions to work
Makes witnesses concentrate on remembering
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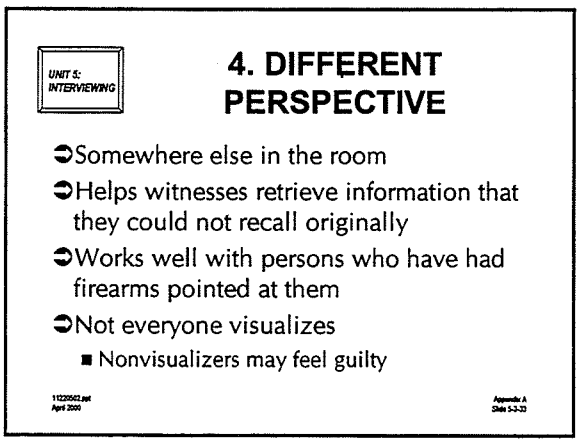
April 2000
Appendix A
Slide 5-3-32


UNIT 5:
INTERVIEWING
4. DIFFERENT PERSPECTIVE
Somewhere else in the room
Helps witnesses retrieve information that they could not recall originally
Works well with persons who have had firearms pointed at them
Not everyone visualizes
Nonvisualizers may feel guilty
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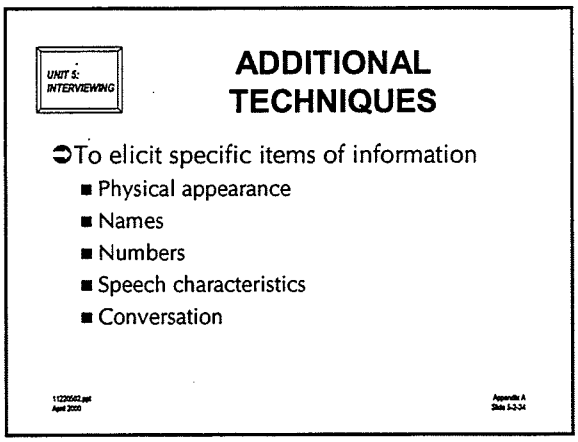
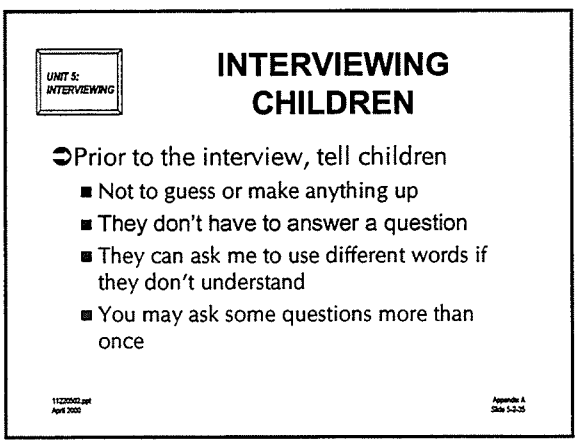
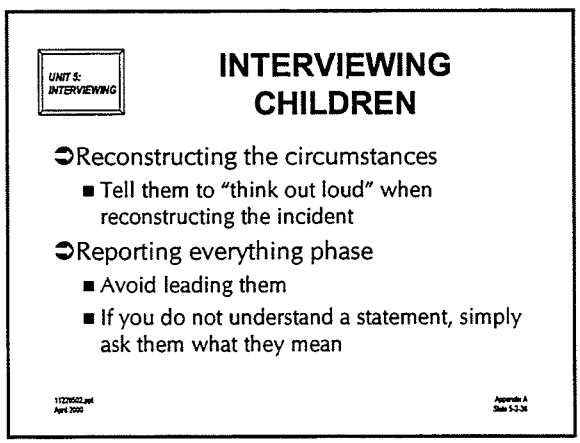
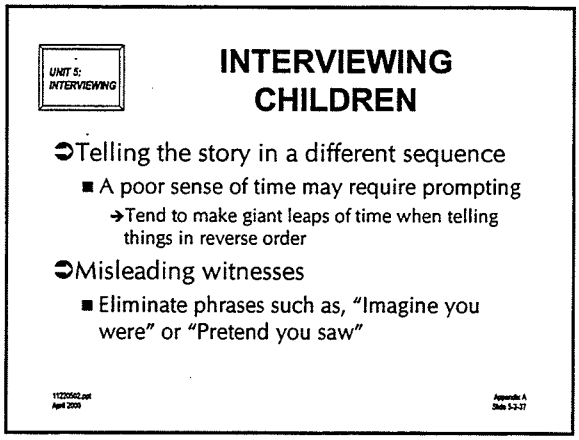
Slide 5-3-33


UNIT 5: INTERVIEWING
ADDITIONAL TECHNIQUES
To elicit specific items of information
Physical appearance
Names
Numbers
Speech characteristics
Conversation


UNIT 5: INTERVIEWING
INTERVIEWING CHILDREN
Prior to the interview, tell children
Not to guess or make anything up
They don't have to answer a question
They can ask me to use different words if they don't understand
You may ask some questions more than once


UNIT 5: INTERVIEWING
INTERVIEWING CHILDREN
Reconstructing the circumstances
Tell them to "think out loud" when reconstructing the incident
Reporting everything phase
Avoid leading them
If you do not understand a statement, simply ask them what they mean


UNIT 5: INTERVIEWING
INTERVIEWING CHILDREN
➲Telling the story in a different sequence
■ A poor sense of time may require prompting
→Tend to make giant leaps of time when telling things in reverse order
➲Misleading witnesses
■ Eliminate phrases such as, "Imagine you were" or "Pretend you saw"
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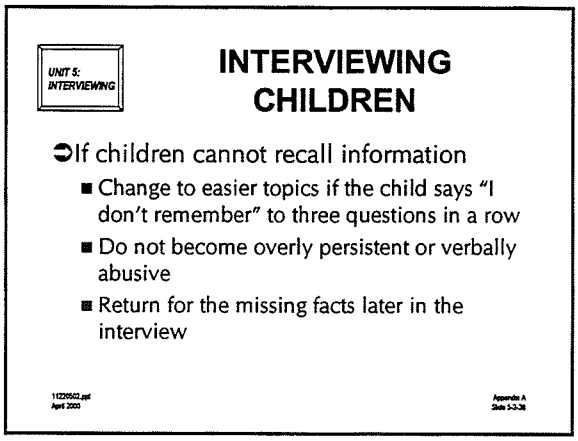
Slide 5-3-37


UNIT 5: INTERVIEWING
INTERVIEWING CHILDREN
➲If children cannot recall information
■ Change to easier topics if the child says "I don't remember" to three questions in a row
■ Do not become overly persistent or verbally abusive
■ Return for the missing facts later in the interview
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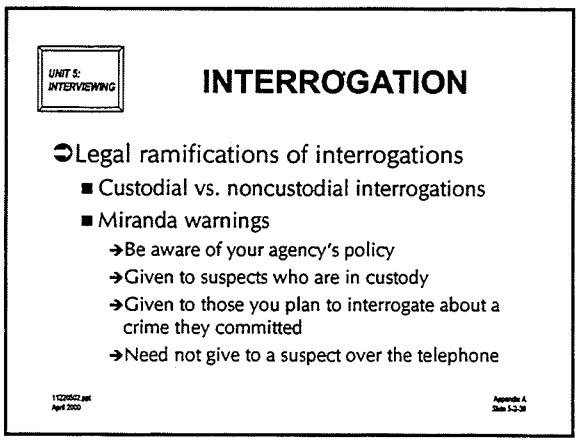
UNIT 5: INTERVIEWING
INTERROGATION
➲Legal ramifications of interrogations
■ Custodial vs. noncustodial interrogations
■ Miranda warnings
→Be aware of your agency's policy
→Given to suspects who are in custody
→Given to those you plan to interrogate about a crime they committed
→Need not give to a suspect over the telephone
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UNIT 5: INTERVIEWING

INTERROGATION

- Custody means a formal arrest
- If there is probable cause but suspect is not under arrest, the officer may interrogate without giving Miranda warnings
- The suspect should be audio-tape recorded

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Slide 5-3-40

UNIT 5: INTERVIEWING

CONFRONTATION TECHNIQUE

- Proven successful where guilt is fairly certain
- Interrogator knows suspect is guilty, but wants to know the reason for the crime
- Psychological domination
  - Suspects left alone for a period of time
  - Props may assist in dominating suspects

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Appendix A
Slide 5-3-41

UNIT 5: INTERVIEWING

CONFRONTATION STATEMENT

- Assures suspects that there is no doubt of their guilt
- After you re-enter the interrogation room
  - Address suspect by first name
  - Make an actual or improvised fact synopsis
- Suspect's personality determines if you use emotion-packed or legalistic words

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Appendix A
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CONFRONTATION STATEMENT

- After the confrontation statement
  - Pause briefly to determine the suspects' response or lack of response
  - No response may be an adoptive admission
  - An innocent person would vehemently deny the charge

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Appendix A
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HANDLING DENIALS

- Expect the suspects to deny the crimes
- Allow a denial or an alibi only once
  - Repeated denials give the suspects a psychological boost
- Prevent repeated denials
- Deceptive suspects may
  - Make evasive or qualified denials
  - Use delaying tactics or phony surprise

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Appendix A
Slide 5-2-44

TRANSITIONAL PHASE

- Lessens the shock of the confrontation statement
- Avoids awkwardness but does not immediately soften the impact of the confrontation statement

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UNIT 5: INTERVIEWING

THEME DEVELOPMENT

- A psychological, social, or moral excuse for the crime
- Makes it easier for the suspect to confess
- End the theme with a close-ended question
  - "That's why you did it isn't it?"

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Appendix A
Slide 5-3-46

UNIT 5: INTERVIEWING

TYPES OF THEMES

- Sympathy
- Pride/flattery
- Blame transference
- Less reprehensible motive
- Minimize crime
- Develop 3-4 themes before the interrogation
- You can see when your themes are being accepted by the suspect
  - Facial expressions
  - Body language

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UNIT 5: INTERVIEWING

OVERCOMING OBJECTIONS

- An objection does not deny the accusation but attempts to give an excuse why the accusation could not be true
- When suspects start to object to, rather than deny the accusation, it is an indication that you have handled their denial phase correctly

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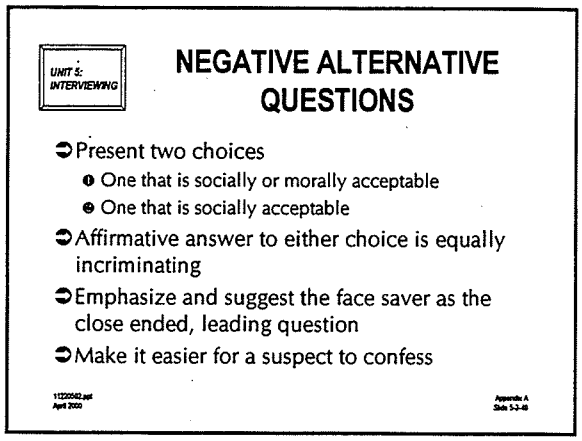
UNIT 5: INTERVIEWING
NEGATIVE ALTERNATIVE QUESTIONS
Present two choices
One that is socially or morally acceptable
One that is socially acceptable
Affirmative answer to either choice is equally incriminating
Emphasize and suggest the face saver as the close ended, leading question
Make it easier for a suspect to confess
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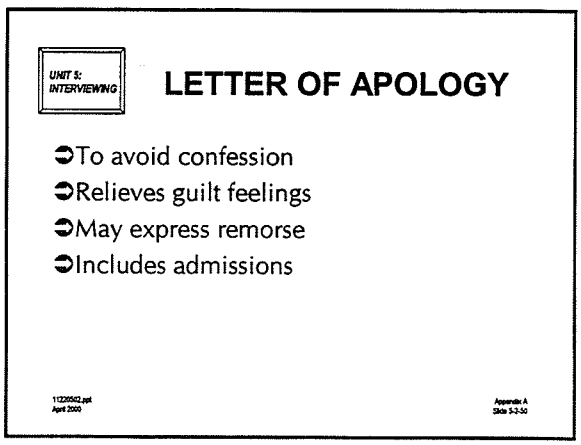
UNIT 5: INTERVIEWING
LETTER OF APOLOGY
To avoid confession
Relieves guilt feelings
May express remorse
Includes admissions
1122050.ppt
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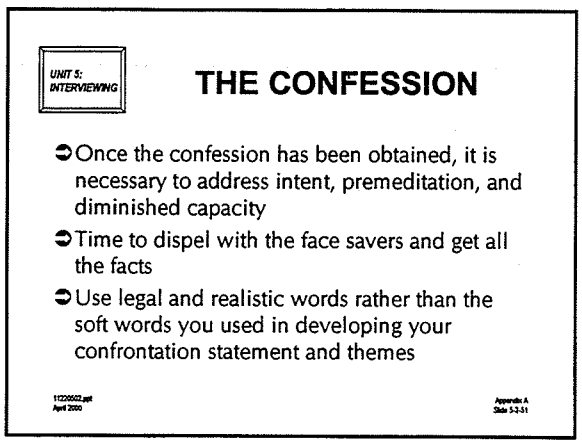
UNIT 5: INTERVIEWING
THE CONFESSION
Once the confession has been obtained, it is necessary to address intent, premeditation, and diminished capacity
Time to dispel with the face savers and get all the facts
Use legal and realistic words rather than the soft words you used in developing your confrontation statement and themes
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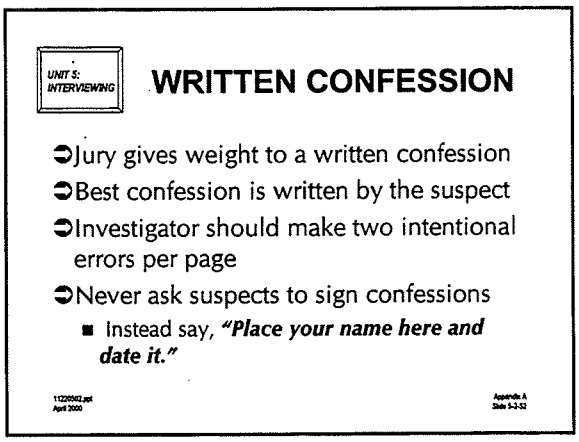
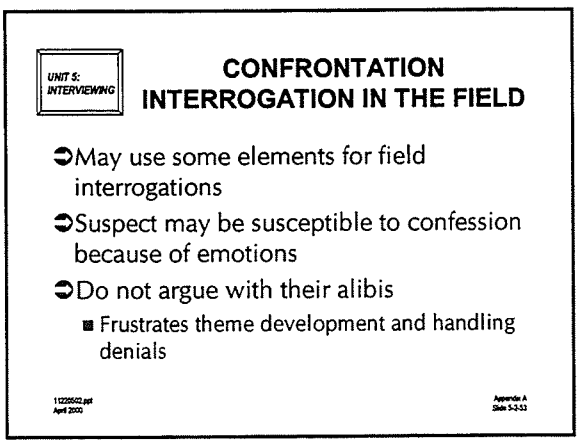
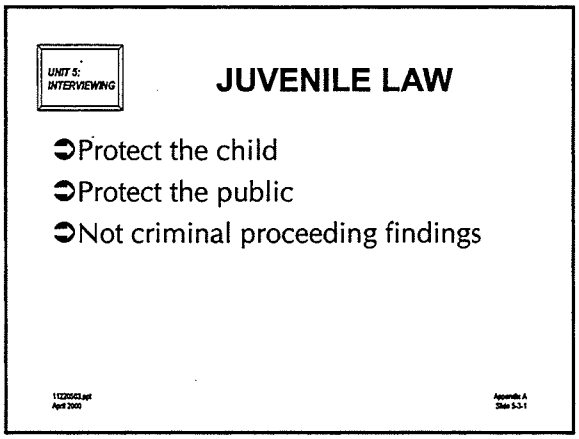

UNIT 5: INTERVIEWING
WRITTEN CONFESSION
Jury gives weight to a written confession
Best confession is written by the suspect
Investigator should make two intentional errors per page
Never ask suspects to sign confessions
Instead say, "Place your name here and date it."


UNIT 5: INTERVIEWING
CONFRONTATION INTERROGATION IN THE FIELD
May use some elements for field interrogations
Suspect may be susceptible to confession because of emotions
Do not argue with their alibis
Frustrates theme development and handling denials


UNIT 5: INTERVIEWING
JUVENILE LAW
Protect the child
Protect the public
Not criminal proceeding findings
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Appendix A
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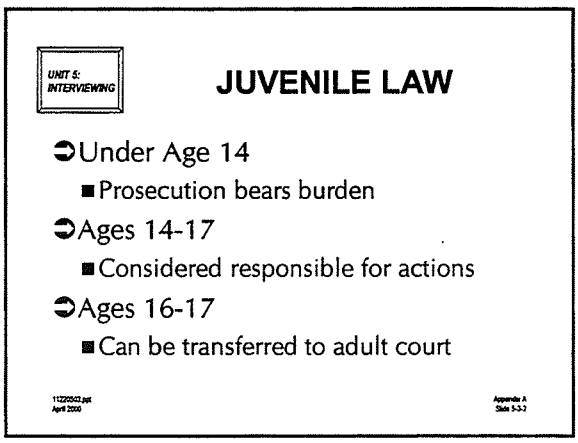
UNIT 5: INTERVIEWING
JUVENILE LAW
Under Age 14
Prosecution bears burden
Ages 14-17
Considered responsible for actions
Ages 16-17
Can be transferred to adult court
1122SS3.ppt
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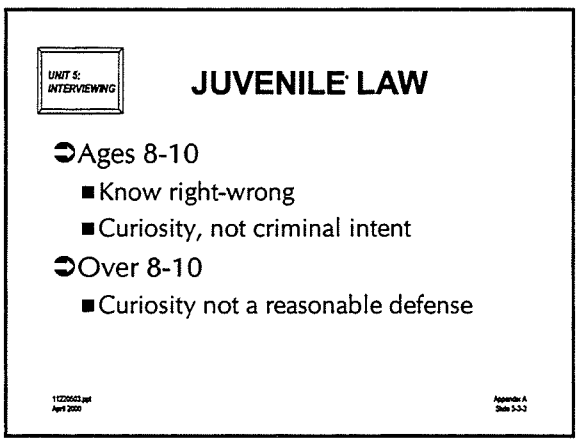
UNIT 5: INTERVIEWING
JUVENILE LAW
Ages 8-10
Know right-wrong
Curiosity, not criminal intent
Over 8-10
Curiosity not a reasonable defense
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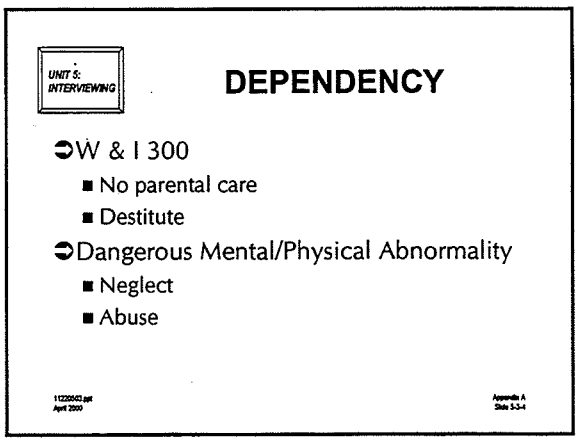
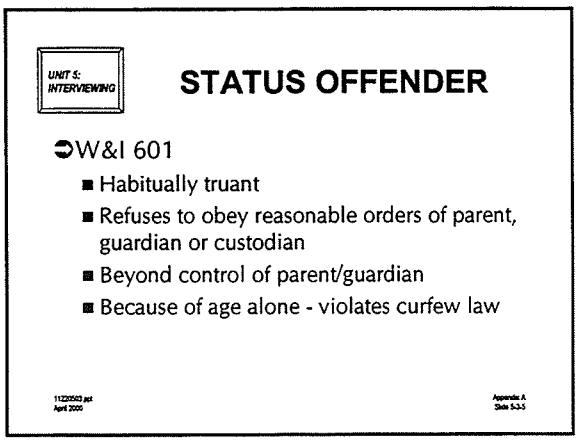
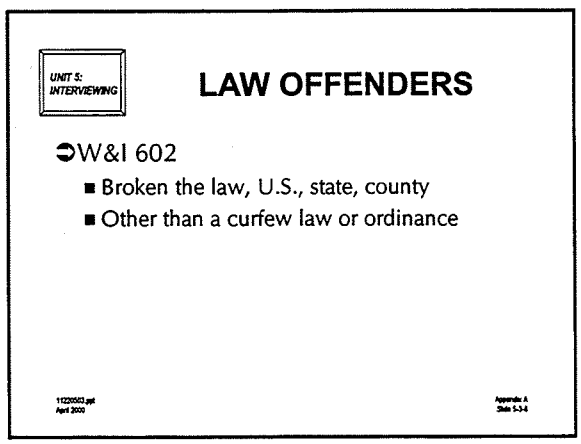
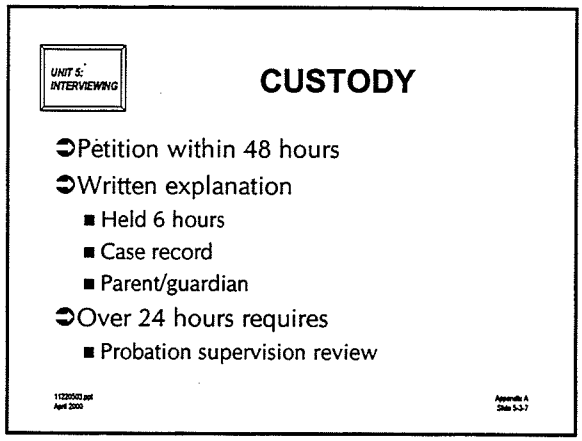
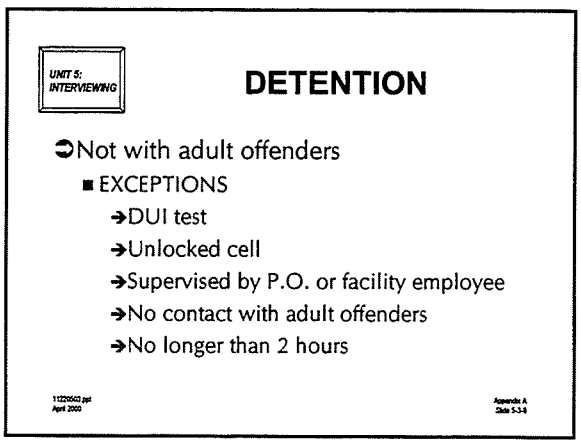
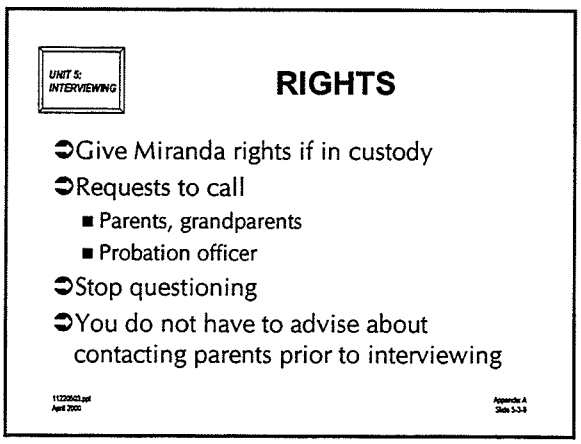

UNIT 5:
INTERVIEWING
DEPENDENCY
W & I 300
No parental care
Destitute
Dangerous Mental/Physical Abnormality
Neglect
Abuse

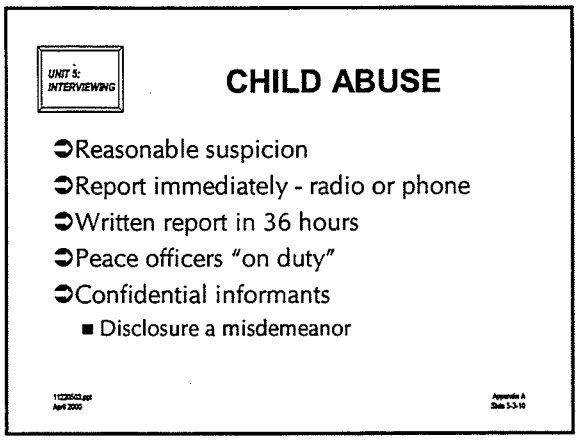

UNIT 5:
INTERVIEWING
STATUS OFFENDER
W&I 601
Habitually truant
Refuses to obey reasonable orders of parent, guardian or custodian
Beyond control of parent/guardian
Because of age alone - violates curfew law


UNIT 5:
INTERVIEWING
LAW OFFENDERS
W&I 602
Broken the law, U.S., state, county
Other than a curfew law or ordinance


UNIT 5: INTERVIEWING
CUSTODY
Petition within 48 hours
Written explanation
Held 6 hours
Case record
Parent/guardian
Over 24 hours requires
Probation supervision review


UNIT 5: INTERVIEWING
DETENTION
Not with adult offenders
EXCEPTIONS
DUI test
Unlocked cell
Supervised by P.O. or facility employee
No contact with adult offenders
No longer than 2 hours


UNIT 5: INTERVIEWING
RIGHTS
Give Miranda rights if in custody
Requests to call
Parents, grandparents
Probation officer
Stop questioning
You do not have to advise about contacting parents prior to interviewing


UNIT 5:
INTERVIEWING
CHILD ABUSE
Reasonable suspicion
Report immediately - radio or phone
Written report in 36 hours
Peace officers "on duty"
Confidential informants
Disclosure a misdemeanor

UNIT 6: FATALITIES AND INJURIES

FIRE DEATH OR INJURY

- Discovered at fire scene
- Result of escaping or fleeing fire
- Fire suppression related
- Systematic investigation
- Injury just as important
  - To investigate
  - To document

1122000601.ppt
April 2000

Appendix A
Slide 6-1-1

UNIT 6: FATALITIES AND INJURIES

FIRE DEATH OR INJURY

- Civilian
  - Criminal act
  - Accidental - civil action - law suit
- Fire fighter
  - Occupational injury investigation
  - Departmental investigation

1122000601.ppt
April 2000

Appendix A
Slide 6-1-2

UNIT 6: FATALITIES AND INJURIES

FIRE/CRIME SCENE

TWO AREAS TO INVESTIGATE

1. Area of origin
   - Prevent contamination
   - Suspend overhaul
   - Limit access
   - Establish perimeter

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April 2000

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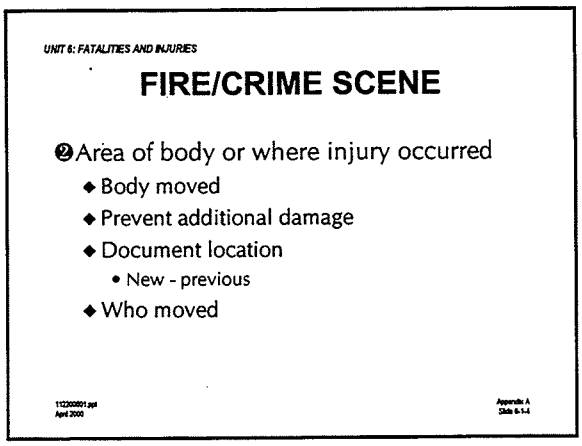
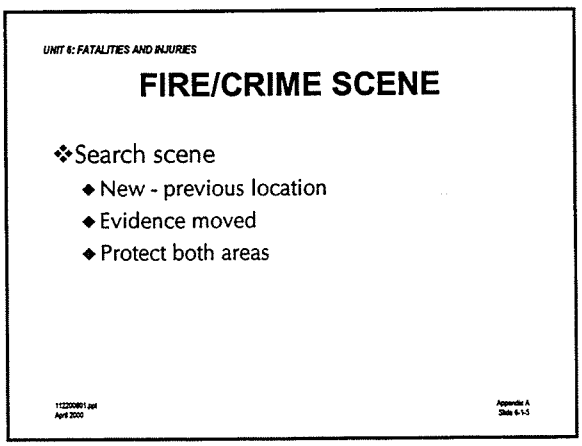
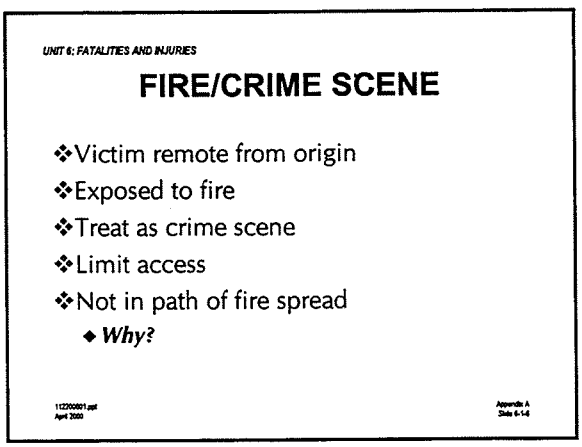
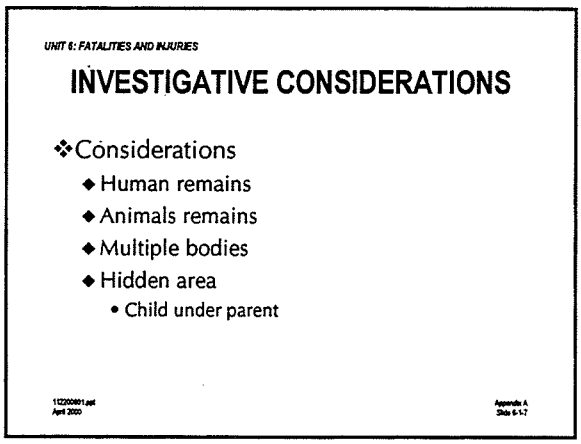
Slide 6-1-3


UNIT 6: FATALITIES AND INJURIES
FIRE/CRIME SCENE
Area of body or where injury occurred
Body moved
Prevent additional damage
Document location
New - previous
Who moved


UNIT 6: FATALITIES AND INJURIES
FIRE/CRIME SCENE
Search scene
New - previous location
Evidence moved
Protect both areas


UNIT 6: FATALITIES AND INJURIES
FIRE/CRIME SCENE
Victim remote from origin
Exposed to fire
Treat as crime scene
Limit access
Not in path of fire spread
Why?


UNIT 6: FATALITIES AND INJURIES
INVESTIGATIVE CONSIDERATIONS
❖Considerations
◆Human remains
◆Animals remains
◆Multiple bodies
◆Hidden area
• Child under parent
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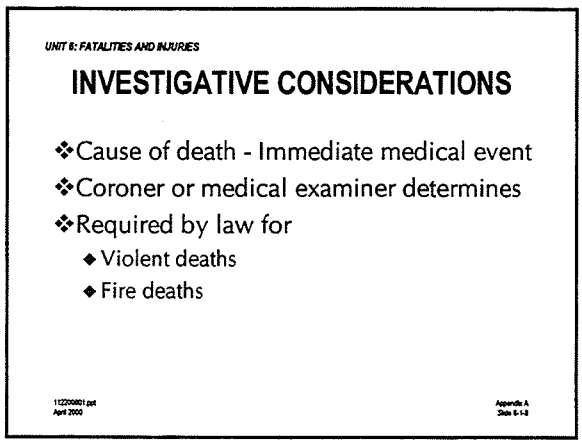
UNIT 6: FATALITIES AND INJURIES
INVESTIGATIVE CONSIDERATIONS
❖Cause of death - Immediate medical event
❖Coroner or medical examiner determines
❖Required by law for
◆Violent deaths
◆Fire deaths
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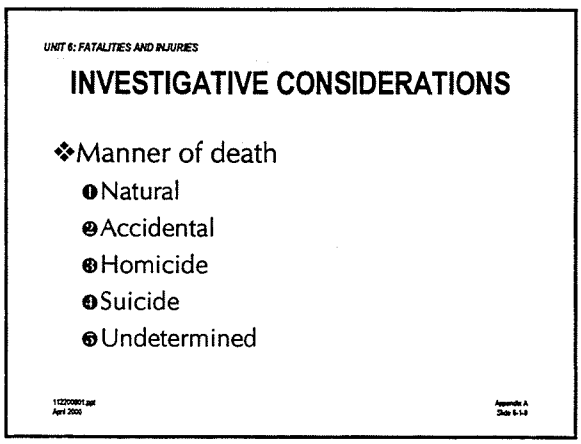
Appendix A
Slide 6-1-8


UNIT 6: FATALITIES AND INJURIES
INVESTIGATIVE CONSIDERATIONS
❖Manner of death
❶Natural
❷Accidental
❸Homicide
❹Suicide
❺Undetermined
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Appendix A
Slide 6-1-9

UNIT 6: FATALITIES AND INJURIES

INVESTIGATIVE CONSIDERATIONS

- Alive during fire
  - Asphyxiation indications
  - Carbon monoxide level
  - Examine airways
    - Nose
    - Mouth-throat
    - ***Is soot present?***

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Appendix A
Slide 6-1-10

UNIT 6: FATALITIES AND INJURIES

INVESTIGATIVE CONSIDERATIONS

- Position found
  - Near origin or ignition source
  - Fleeing
  - Sleeping
  - Near exit
  - Attempting to extinguish

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Appendix A
Slide 6-1-11

UNIT 6: FATALITIES AND INJURIES

INVESTIGATIVE CONSIDERATIONS

THE MOST CRITICAL QUESTION

Was death due to the fire?

or

Was death only associated with the fire (dead before the fire)?

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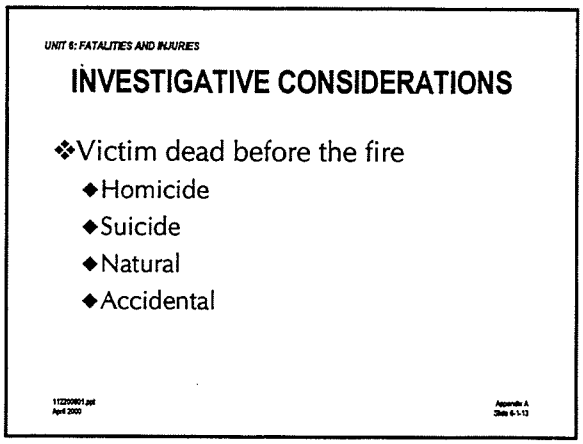
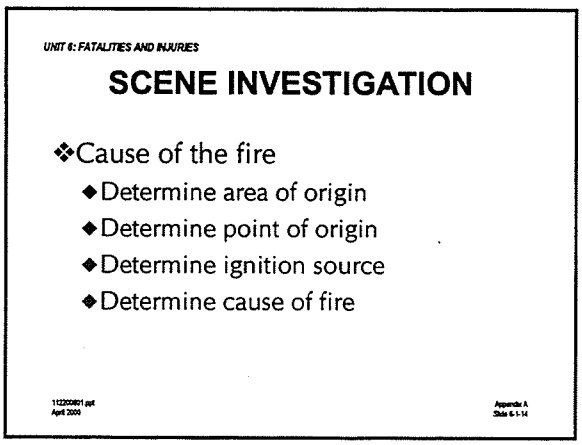
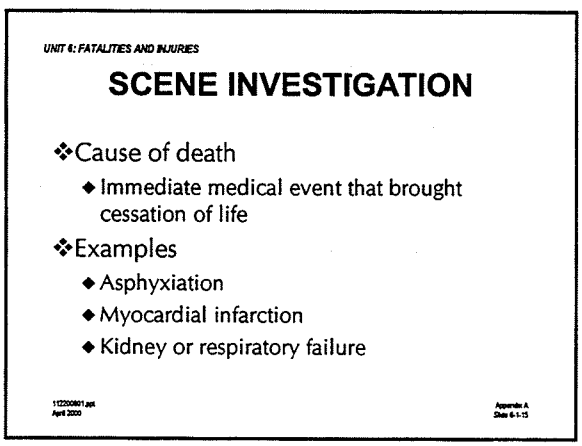

UNIT 6: FATALITIES AND INJURIES
INVESTIGATIVE CONSIDERATIONS
❖Victim dead before the fire
◆Homicide
◆Suicide
◆Natural
◆Accidental


UNIT 6: FATALITIES AND INJURIES
SCENE INVESTIGATION
❖Cause of the fire
◆Determine area of origin
◆Determine point of origin
◆Determine ignition source
◆Determine cause of fire


UNIT 6: FATALITIES AND INJURIES
SCENE INVESTIGATION
❖Cause of death
◆Immediate medical event that brought cessation of life
❖Examples
◆Asphyxiation
◆Myocardial infarction
◆Kidney or respiratory failure

UNIT 6: FATALITIES AND INJURIES

DEATH TIME FRAMES

- ❖Rapid
  - ◆Heat, smoke, carbon monoxide
- ❖Day 1 or Day 2
  - ◆Shock, fluid loss, electrolyte imbalance
- ❖Days or Weeks
  - ◆Infections, organ failure

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UNIT 6: FATALITIES AND INJURIES

MANNER OF DEATH

- ❖Circumstances in which the cause of death occurred
- ❖Determined by investigation team members
- ❖Five generally accepted manners of death

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UNIT 6: FATALITIES AND INJURIES

MANNER OF DEATH

- ❶Accidental
  - ◆Accidental death prior to the fire
  - ◆Death from accidentally occurring fire
- ❷Natural
  - ◆Natural death prior to the fire
  - ◆Death due to pre-existing condition exacerbated by fire environment

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

MANNER OF DEATH

❸ Homicide
- Intentionally killed prior to the fire
- Fire used as an instrument to cause the death

❹ Suicide
- Suicide prior to the fire
- Fire used as a instrument to effect suicide

❺ Undetermined

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Appendix A
Slide 6-1-19

UNIT 6: FATALITIES AND INJURIES

INVESTIGATION CONCERNS

❖ Fire Cause
❖ Cause of death
❖ Manner of death

ALL OF THESE ARE INTERRELATED

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Appendix A
Slide 6-1-20

UNIT 6: FATALITIES AND INJURIES

TEAM INVESTIGATIVE EFFORTS

❖ Many disciplines and professionals involved
❖ Coordination is essential
❖ Multiple agencies/departments

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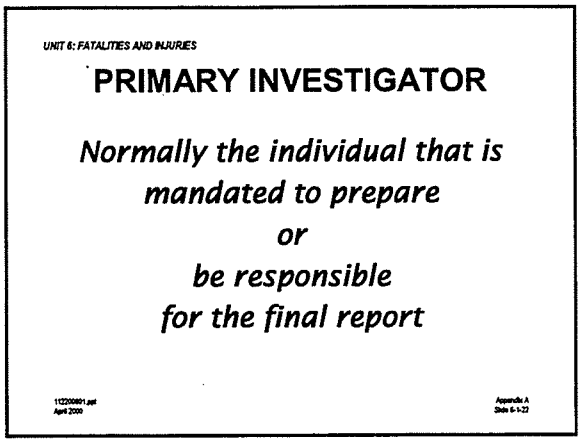
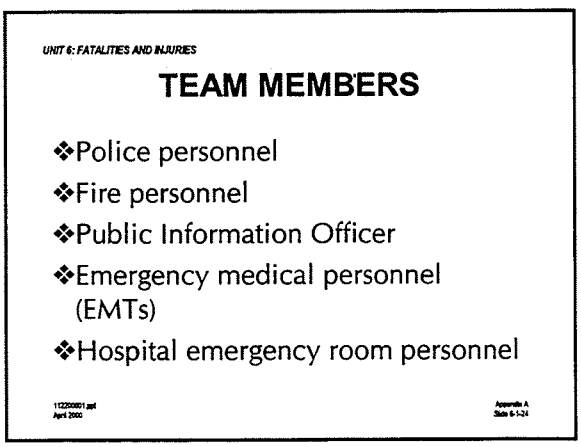
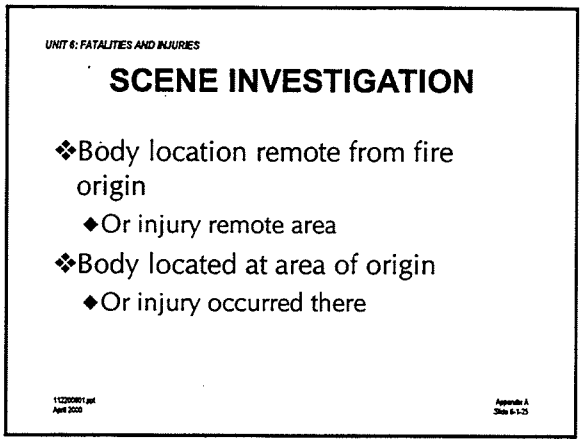
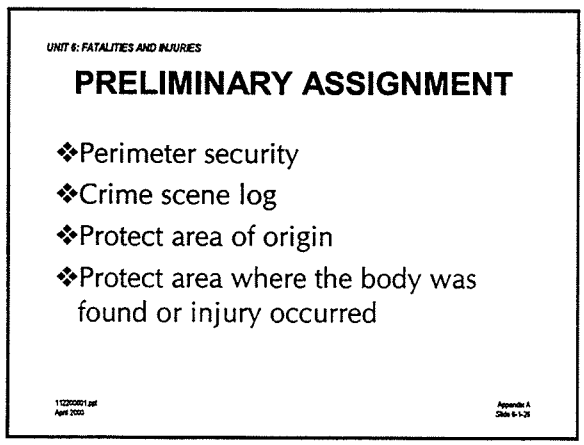
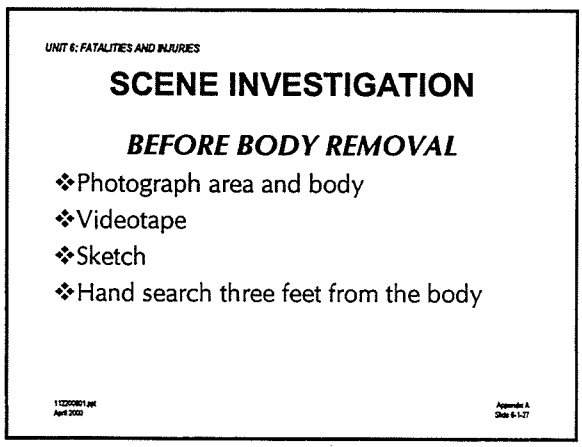

UNIT 6: FATALITIES AND INJURIES
PRIMARY INVESTIGATOR
Normally the individual that is
mandated to prepare
or
be responsible
for the final report


UNIT 6: FATALITIES AND INJURIES
TEAM MEMBERS
Fire investigator
Homicide investigator
Coroner/medical examiner
Deputy District Attorney
Pathologist
Radiologist
Toxicologist
Forensic odontologist
Forensic anthropologist
Crime scene technicians
Evidence technicians
Accelerant detecting canine


UNIT 6: FATALITIES AND INJURIES
TEAM MEMBERS
Police personnel
Fire personnel
Public Information Officer
Emergency medical personnel (EMTs)
Hospital emergency room personnel


UNIT 6: FATALITIES AND INJURIES
SCENE INVESTIGATION
❖Body location remote from fire origin
◆Or injury remote area
❖Body located at area of origin
◆Or injury occurred


UNIT 6: FATALITIES AND INJURIES
PRELIMINARY ASSIGNMENT
❖Perimeter security
❖Crime scene log
❖Protect area of origin
❖Protect area where the body was found or injury occurred


UNIT 6: FATALITIES AND INJURIES
SCENE INVESTIGATION
BEFORE BODY REMOVAL
❖Photograph area and body
❖Videotape
❖Sketch
❖Hand search three feet from the body

UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION

- Examine body in place
  - Parts missing
    - Fire caused
    - Building collapse
    - Suppression caused

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION

- Injuries or damage to body
  - Charring
  - Defensive
  - Blunt trauma
  - Penetrating trauma
  - Burns

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Appendix A
Slide 6-1-29

UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION

- Fractures
- Bone shrinkage
- Skin tightening
- Skull damage/fracture
- Skin blistering
  - Color

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UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION

- Blood on body
- Teeth
- Hair color
- Clothing
- Weapons

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Appendix A
Slide 6-1-31

UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION

- Body removed *(coordinate with team members)*
  - Examine underside
  - Examine protected area
  - Document
  - Sift debris
  - Blood under the body
  - Photograph
  - Videotape

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

SCENE INVESTIGATION

- Examine protected area under the body
  - Trace evidence
  - Weapons
  - Clothing
  - Smoking material
  - Drug paraphernalia

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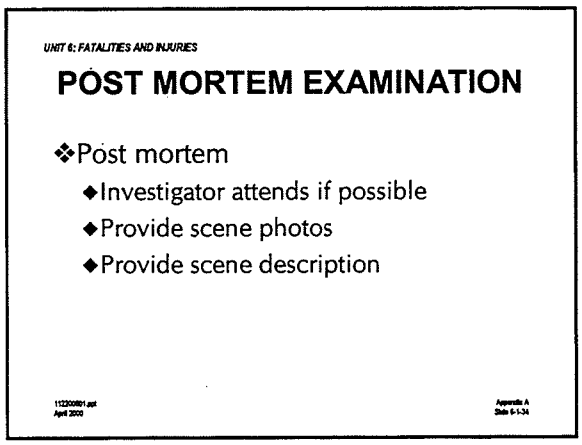
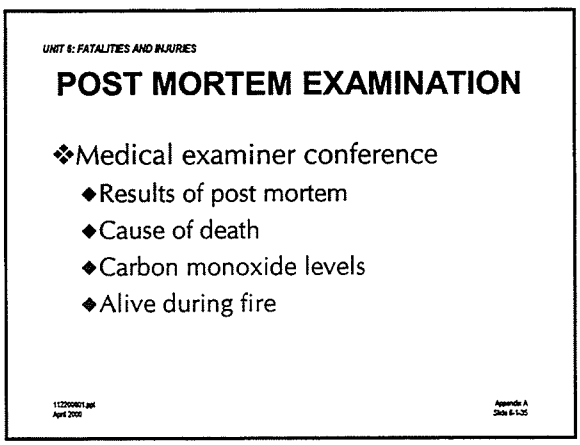
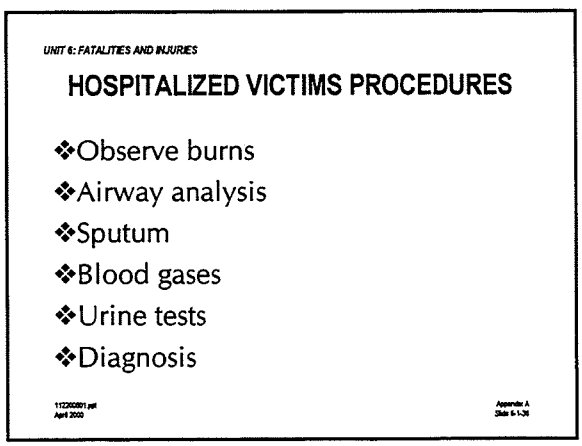
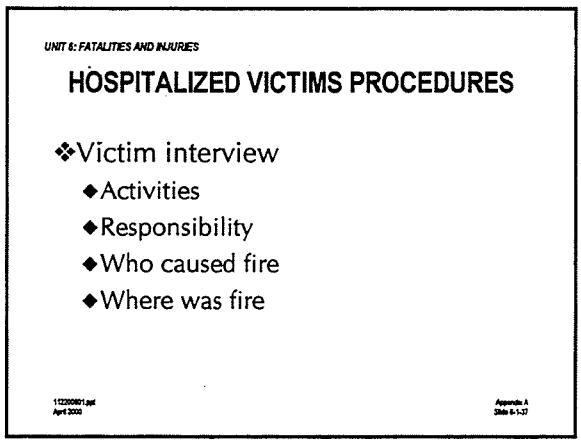
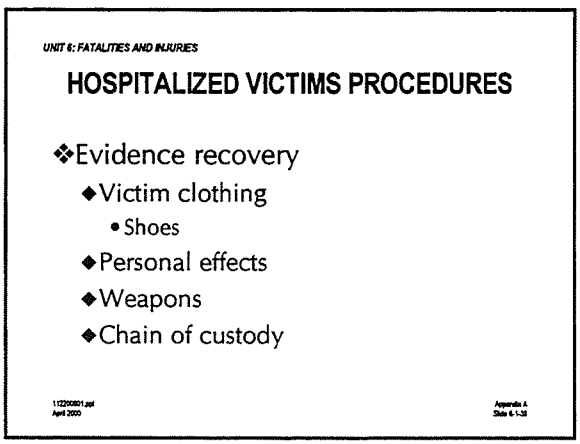
Appendix A
Slide 6-1-33


UNIT 6: FATALITIES AND INJURIES
POST MORTEM EXAMINATION
❖Post mortem
◆Investigator attends if possible
◆Provide scene photos
◆Provide scene description


UNIT 6: FATALITIES AND INJURIES
POST MORTEM EXAMINATION
❖Medical examiner conference
◆Results of post mortem
◆Cause of death
◆Carbon monoxide levels
◆Alive during fire


UNIT 6: FATALITIES AND INJURIES
HOSPITALIZED VICTIMS PROCEDURES
❖Observe burns
❖Airway analysis
❖Sputum
❖Blood gases
❖Urine tests
❖Diagnosis


UNIT 6: FATALITIES AND INJURIES
HOSPITALIZED VICTIMS PROCEDURES
❖Victim interview
◆Activities
◆Responsibility
◆Who caused fire
◆Where was fire


UNIT 6: FATALITIES AND INJURIES
HOSPITALIZED VICTIMS PROCEDURES
❖Evidence recovery
◆Victim clothing
• Shoes
◆Personal effects
◆Weapons
◆Chain of custody

UNIT 6: FATALITIES AND INJURIES

HOSTILE ENVIRONMENT

- Structure collapse
- Falls
  - Escaping
  - Structure failure
  - Multi-system trauma
- Heat
  - Damage to skin
  - Muscle contraction
  - Skull fracture
- Soot and smoke
  - Inhalation injuries
  - Reflective constriction
  - Rapid edema
- Low oxygen
  - Hypoxia
  - Anoxia

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

TOXIC ENVIRONMENT

- Lung damage
  - Impair function
- Gases pass through lungs into blood stream
  - Impair function
- Carbon monoxide
  - Asphyxiation
- Hydrogen chloride
- Hydrogen cyanide
- Carbon dioxide
- Nitrogen oxides
- Phosgene

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Appendix A
Slide 6-3-2

UNIT 6: FATALITIES AND INJURIES

CRUSHING INJURIES

- Musculoskeletal system
- Compromise respiratory functions
  - Lungs unable to inflate
  - Flail chest
  - Rib fracture
- Compromise circulatory function
  - Damage to heart/aorta
  - Shock

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Appendix A
Slide 6-3-3

UNIT 6: FATALITIES AND INJURIES

FALLS

- Escaping
  - Jumping, pushed, thrown from building
- Multi-system trauma
  - Function of height
  - Impact zone
  - Compression injuries
  - Cervical spine injuries

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

HEAT

- Destruction of the body
  - Rarely destroys all anatomical features
- Cremation - legal incineration
  - 950 - 1000 degrees C
  - 1800 - 2100 degrees F
  - 1 - 2 hours duration for complete body destruction

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Appendix A
Slide 6-3-5

UNIT 6: FATALITIES AND INJURIES

IF BODY IS SUPPORTED

On Metal Furniture Or Seat Springs

- Provides better exposure to flames
- Is consumed to larger degree than expected
- Accounts for extensive consumption of bodies in vehicle fires

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Appendix A
Slide 6-3-6

UNIT 6: FATALITIES AND INJURIES

SPONTANEOUS HUMAN COMBUSTION

Erroneously identified when there is substantial incineration of the body without destruction of dwelling or other fuels in the vicinity

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Appendix A
Slide 6-3-7

UNIT 6: FATALITIES AND INJURIES

COMMON ELEMENTS

- Elderly
- Partial incapacitation
- Overweight
- Ignition source nearby
- Long time frame
- Clothing, bedding, carpet act as wick
- Little open flame
- Insufficient heat to encourage fire growth
- Candle (wick) effect
- Unburned pyrolysis products condense

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Appendix A
Slide 6-3-8

UNIT 6: FATALITIES AND INJURIES

BURN INJURIES

- May result in death after weeks of hospitalization
- Process like an immediate-death fire
- Preserve physical evidence
  - Clothing
  - Shoes
  - Other items associated with victim

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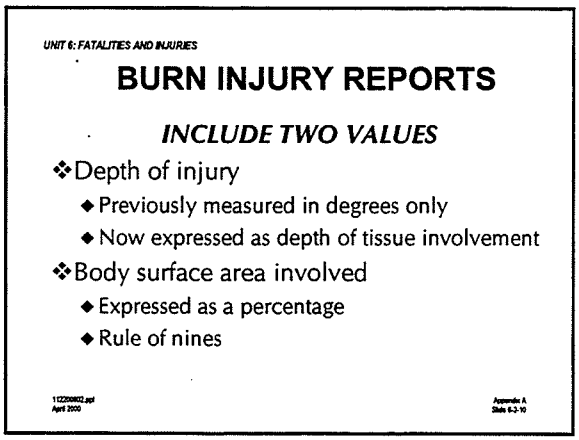
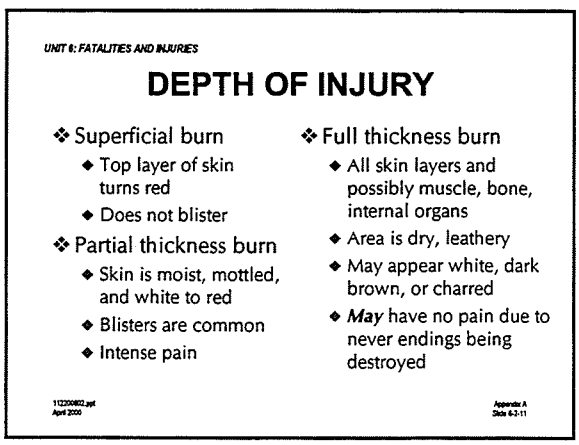
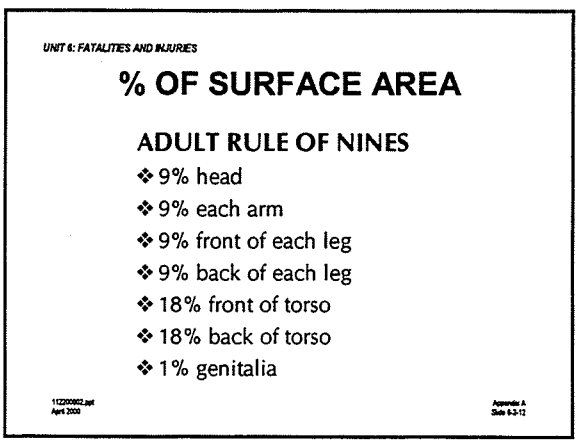
Appendix A
Slide 6-3-9


UNIT 6: FATALITIES AND INJURIES
BURN INJURY REPORTS
INCLUDE TWO VALUES
Depth of injury
Previously measured in degrees only
Now expressed as depth of tissue involvement
Body surface area involved
Expressed as a percentage
Rule of nines


UNIT 6: FATALITIES AND INJURIES
DEPTH OF INJURY
Superficial burn
Top layer of skin turns red
Does not blister
Partial thickness burn
Skin is moist, mottled, and white to red
Blisters are common
Intense pain
Full thickness burn
All skin layers and possibly muscle, bone, internal organs
Area is dry, leathery
May appear white, dark brown, or charred
May have no pain due to never endings being destroyed


UNIT 6: FATALITIES AND INJURIES
% OF SURFACE AREA
ADULT RULE OF NINES
9% head
9% each arm
9% front of each leg
9% back of each leg
18% front of torso
18% back of torso
1% genitalia

UNIT 6: FATALITIES AND INJURIES

CLASSIFICATION OF BURNS

- ❖CRITICAL
- ❖MODERATE
- ❖MINOR
- ❖DEPENDENT UPON
  - ◆ Depth
  - ◆ Percent of body surface
  - ◆ Involvement

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

INHALATION INJURIES

- ❖ Hot, dry gases
  - ◆ Rapidly cooled by evaporation of moisture from mouth and throat
  - ◆ Fire damage (edema)
  - ◆ Not normally below the larynx
- ❖ Superheated steam
  - ◆ No evaporative cooling in airway
  - ◆ Damage extends to lungs
  - ◆ Can occur in flash fires of hydrocarbon fuels
  - ◆ Combustion byproducts
  - ◆ Water vapor at very high temperatures

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

CARBON SMOKE & SOLID SOOT

- ❖Particles of carbon smoke and soot
  - ◆ Inhaled while victim is alive
  - ◆ Clings to moist surfaces in throat and lungs
- ❖Solid soot
  - ◆ Soot settling on victim lying face up in room
  - ◆ Found just inside mouth and nose
  - ◆ May not be indication of victim breathing at time of fire

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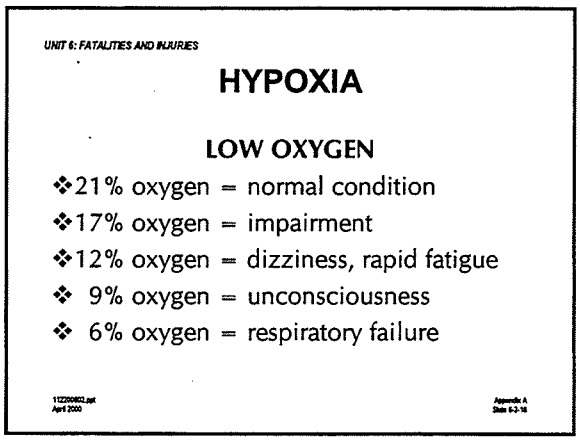
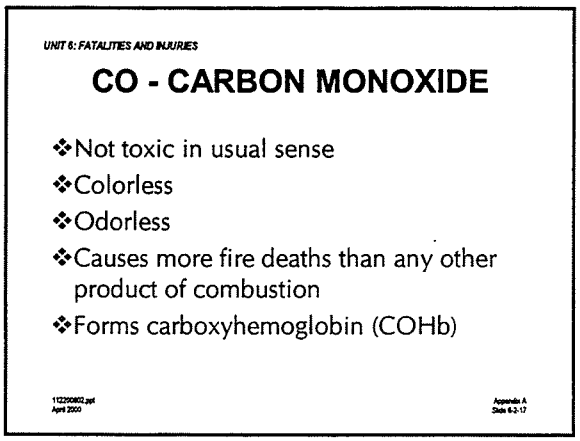
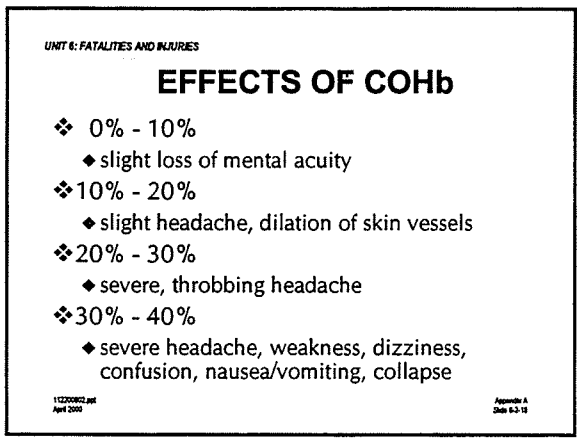
Slide 6-3-15


UNIT 6: FATALITIES AND INJURIES
HYPOXIA
LOW OXYGEN
❖21% oxygen = normal condition
❖17% oxygen = impairment
❖12% oxygen = dizziness, rapid fatigue
❖ 9% oxygen = unconsciousness
❖ 6% oxygen = respiratory failure


UNIT 6: FATALITIES AND INJURIES
CO - CARBON MONOXIDE
❖Not toxic in usual sense
❖Colorless
❖Odorless
❖Causes more fire deaths than any other product of combustion
❖Forms carboxyhemoglobin (COHb)


UNIT 6: FATALITIES AND INJURIES
EFFECTS OF COHb
❖ 0% - 10%
◆slight loss of mental acuity
❖10% - 20%
◆slight headache, dilation of skin vessels
❖20% - 30%
◆severe, throbbing headache
❖30% - 40%
◆severe headache, weakness, dizziness, confusion, nausea/vomiting, collapse

UNIT 6: FATALITIES AND INJURIES

EFFECTS OF COHb

- 40% - 50%
  - fainting, rapid heart beat, collapse, some death
- 50% - 60%
  - fainting, rapid breathing, possible coma, convulsions, respiratory irregularity
- 60% - 70%
  - convulsions, depressed heart action, death
- 70% - 80+ %
  - weak pulse, respiratory failure, DEATH

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Appendix A
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UNIT 6: FATALITIES AND INJURIES

CO - RATES OF ABSORPTION

- Rate of inhalation - ***BOTH CAN BE FATAL***
  - Low concentration
    - Long period of time
  - High concentration
    - Short period of time
- Activity changes individual's requirements for oxygen
- Susceptibility varies by age of victims

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Appendix A
Slide 6-3-20

UNIT 6: FATALITIES AND INJURIES

PVC - POLYVINYL CHLORIDE

- Household
- Drug stores
- Toy stores
- Merchandise stores

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Appendix A
Slide 6-3-21

UNIT 6: FATALITIES AND INJURIES

HCN - HYDROGEN CYANIDE

- Wool
- Nylon
- Polyurethane foam
- Rubber
- Paper

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Appendix A
Slide 6-3-22

UNIT 6: FATALITIES AND INJURIES

CO2 - CARBON DIOXIDE

- **5%** concentration of CO_2 in the air
  - Increased respiration
  - Headaches
  - Dizziness
  - Sweating
- **10%-20%** concentration of CO_2 in the air
  - Respiratory rate becomes depressed
  - Paralysis of brain's respiratory center
  - Collapse
  - Death

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UNIT 6: FATALITIES AND INJURIES

NITRATES AND NITRITES

CAUSE...

- Arterial dilation
- Variation in blood pressure
- Headaches
- Dizziness

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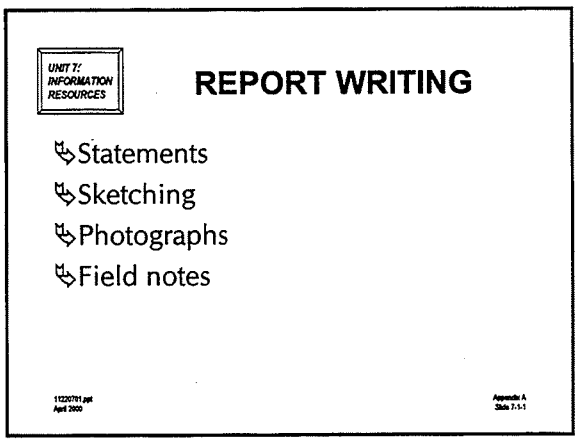
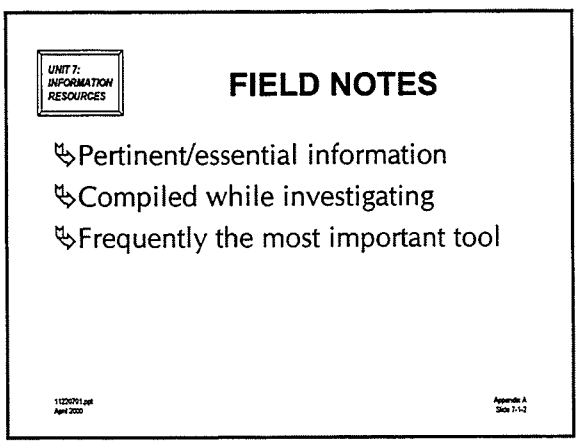
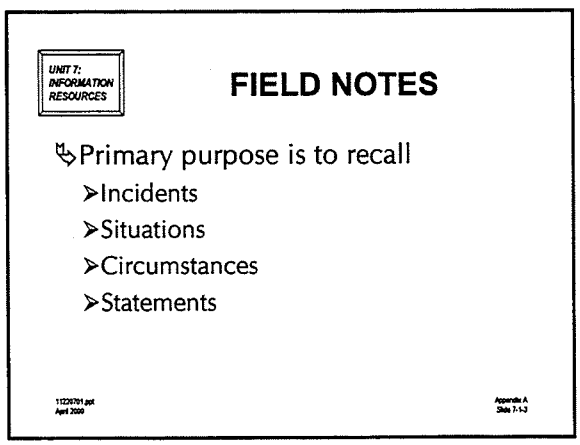
Appendix A
Slide 6-3-24


UNIT 7: INFORMATION RESOURCES
REPORT WRITING
Statements
Sketching
Photographs
Field notes
1122070l.ppt
April 2000
Appendix A
Slide 7-1-1


UNIT 7: INFORMATION RESOURCES
FIELD NOTES
Pertinent/essential information
Compiled while investigating
Frequently the most important tool
1122070l.ppt
April 2000
Appendix A
Slide 7-1-2


UNIT 7: INFORMATION RESOURCES
FIELD NOTES
Primary purpose is to recall
Incidents
Situations
Circumstances
Statements
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Appendix A
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FIELD NOTES

- Allow study, analysis, or evaluation of the scene without a revisit
- Aid with interviews
- Resolve points of conflict
- Outline report writing
- Bring other investigators up-to-date

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PRELIMINARY REPORTS

- Usually the first report
- Basic information
- Usually on a preprinted form
- Used a a guide

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CASE REPORTS

- Official record
- Accidental or incendiary fires
- Contains many reports
- Contains logs and signed statements
- Contains photographs and sketches

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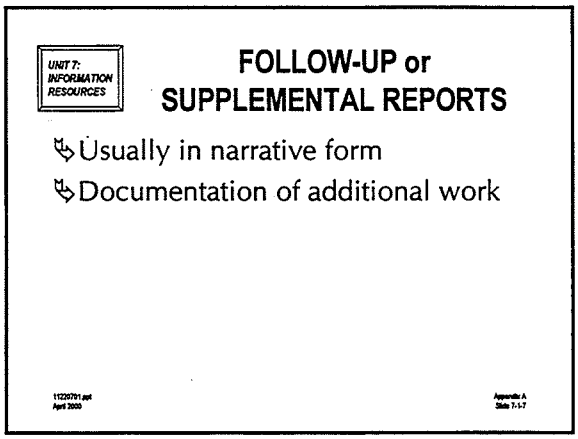
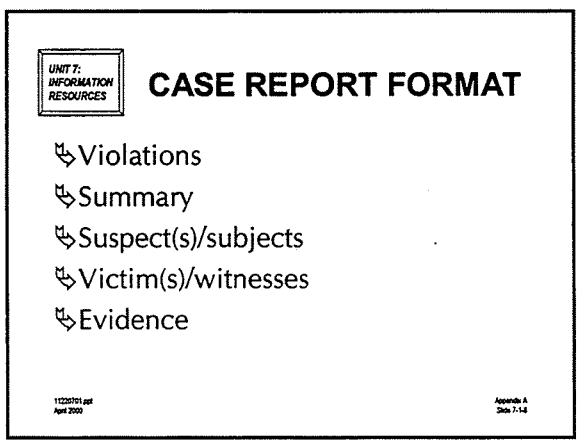
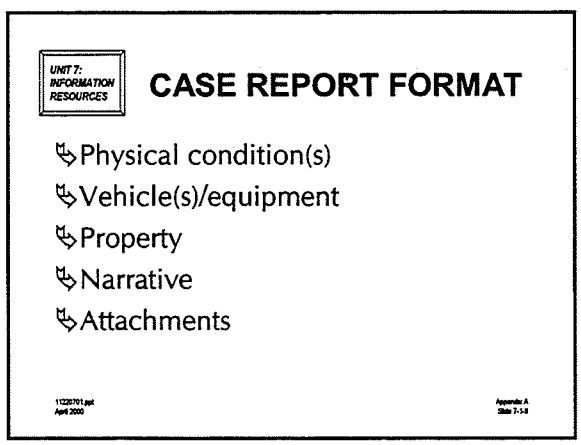
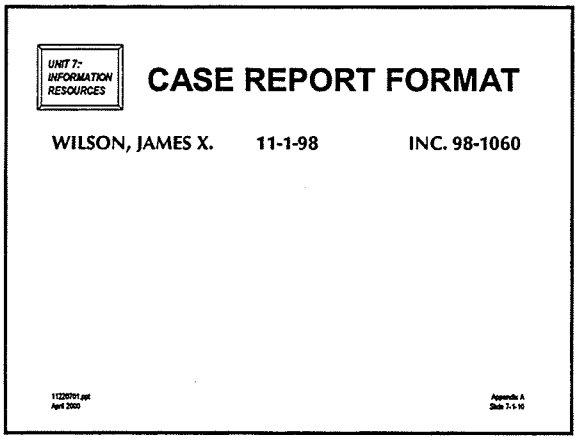
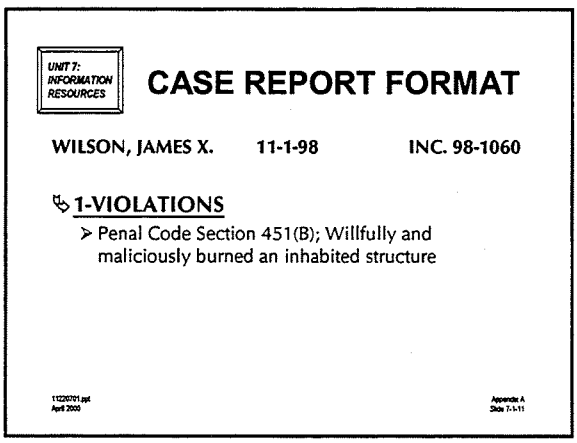
Slide 7-1-6

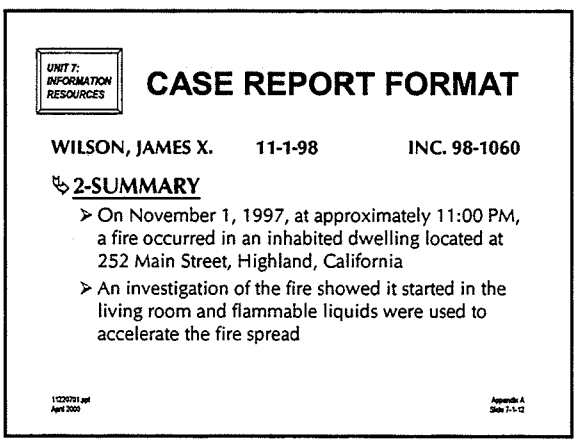

UNIT 7: INFORMATION RESOURCES
FOLLOW-UP or SUPPLEMENTAL REPORTS
Usually in narrative form
Documentation of additional work


UNIT 7: INFORMATION RESOURCES
CASE REPORT FORMAT
Violations
Summary
Suspect(s)/subjects
Victim(s)/witnesses
Evidence


UNIT 7: INFORMATION RESOURCES
CASE REPORT FORMAT
Physical condition(s)
Vehicle(s)/equipment
Property
Narrative
Attachments


UNIT 7: INFORMATION RESOURCES
CASE REPORT FORMAT
WILSON, JAMES X. 11-1-98 INC. 98-1060


UNIT 7: INFORMATION RESOURCES
CASE REPORT FORMAT
WILSON, JAMES X. 11-1-98 INC. 98-1060
1-VIOLATIONS
Penal Code Section 451(B); Willfully and maliciously burned an inhabited structure


UNIT 7: INFORMATION RESOURCES
CASE REPORT FORMAT
WILSON, JAMES X. 11-1-98 INC. 98-1060
2-SUMMARY
On November 1, 1997, at approximately 11:00 PM, a fire occurred in an inhabited dwelling located at 252 Main Street, Highland, California
An investigation of the fire showed it started in the living room and flammable liquids were used to accelerate the fire spread

UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

3-SUSPECT(S)

Wilson, James X.	
WMA, 250, 6'5"	Gray/green
DOB: 07-18-40	Age: 50
Complexion:	Fair, scar under left eye
Home Address:	7717 Base Street Highland, CA 92346 Tel: (909) 555-1212
Work:	Handy Rentals 2519-3rd Street Redlands, CA Tel: (909) 555-2112
CDL:	Jo944444
SS#:	555-00-0000
AKA:	Rodney

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

4-VICTIM(S) AND WITNESS(ES)

NAME:	TESTIFY TO:
Smith, Helen 252 Main Street Highland, CA 92346 (909) 555-1212	Property ownership Argument with S-1 Wilson.
Hunt, Tom 280 Main Street Highland, CA 92346 (909) 555-1212	Overheard argument at fire scene10 minutes before fire
Hunt, Mary 280 Main Street Highland, CA 92346 (909) 555-1212	Observed S-1 Wilson at the fire scene minutes before fire

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

5-EVIDENCE

- See Attachment #2, photographic log
- 1-gallon fuel can, metal, color red with yellow letters: "Flammable Liquid," located in rear seat of James Wilson's vehicle
- Sales receipt from TG&Y store, Redlands dated November 1, 1997, time 10:00 PM for the purchase of 1-gallon fuel can

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

6-PHYSICAL CONDITIONS

- James Wilson was sweating when he was interviewed at 4:00 AM on 11/2/97
- He was fully dressed, including tied shoe laces, when he answered the door at his residence
- He opened the door immediately after the knock
- Weather: no clouds, wind approximately 5 MPH, west

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

7-VEHICLES

- 1986 Hyundai, Excel, 4 door, dark blue, CA license #1MOZ172, black primer right front fender
- Registered to: WILSON, James X.
  7717 Base Street
  Highlands, CA 92346
- Vehicle owned by: WILSON and observed at SMITH'S house ten minutes before fire started

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

8-PROPERTY

- Single story, three bedroom single family residence, wood frame stucco, etc.
- 1 VCR, Sony, Model #1KOO, Serial #2559CS22
- Victim's social security number (555-00-0000) was inscribed on rear of VCR

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

- 9-NARRATIVE OR INVESTIGATION
  - Details of your investigation, activities, and actions
  - Written in the first person
  - Establishes facts
    - Straight narrative
    - Outline narrative
    - Chronological outline
  - Synopsis of statements

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UNIT 7: INFORMATION RESOURCES

CASE REPORT FORMAT

WILSON, JAMES X. 11-1-98 INC. 98-1060

- 10-ATTACHMENTS
  - Photo log - 2 pages
  - Evidence log - 1 page
  - Written statement of SMITH, Helen
  - Audio tape of SMITH, John
  - Audio tape of HUNT, Tom
  - Audio tape of HUNT, Mary
  - Audio tape of WILSON, James
  - Written confessions of WILSON, James

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UNIT 7: INFORMATION RESOURCES

GENERAL PROVISIONS

- Investigator's name, badge number, and signature
- Signature on right-hand side of page at conclusion of narrative section
- Title or rank below signature
- Date report was written underneath title or rank

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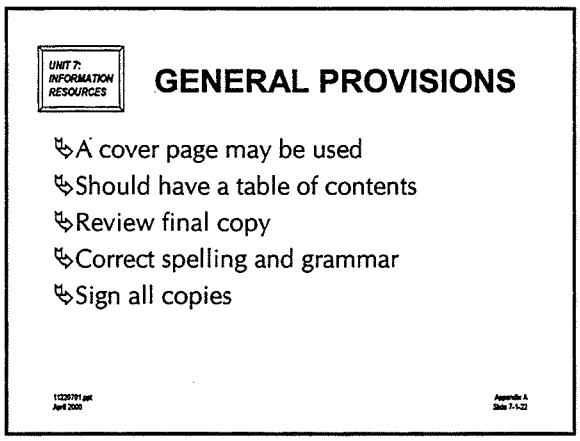
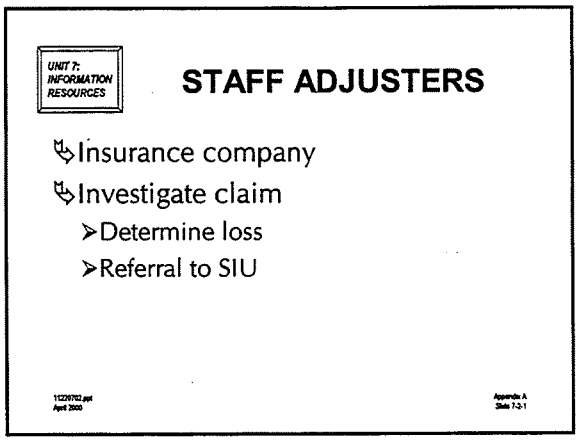

UNIT 7: INFORMATION RESOURCES
GENERAL PROVISIONS
A cover page may be used
Should have a table of contents
Review final copy
Correct spelling and grammar
Sign all copies


UNIT 7: INFORMATION RESOURCES
STAFF ADJUSTERS
Insurance company
Investigate claim
Determine loss
Referral to SIU
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April 2000
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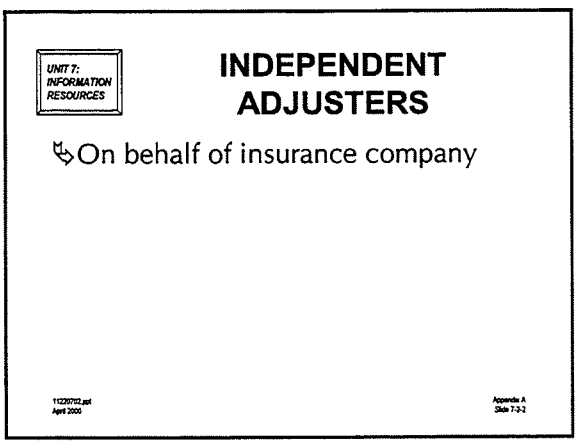
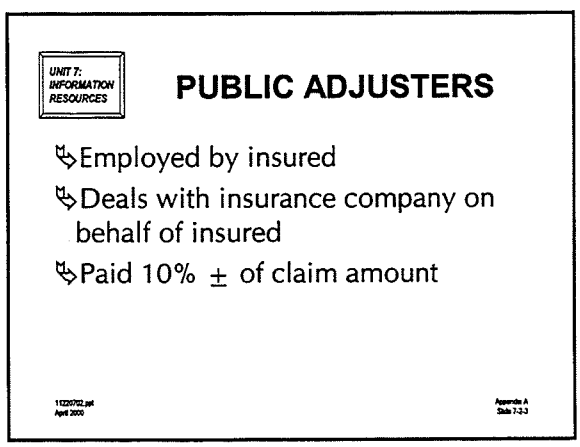

UNIT 7: INFORMATION RESOURCES
INDEPENDENT ADJUSTERS
On behalf of insurance company
1122070Z.ppt
April 2000
Appendix A
Slide 7-3-2


UNIT 7: INFORMATION RESOURCES
PUBLIC ADJUSTERS
Employed by insured
Deals with insurance company on behalf of insured
Paid 10% ± of claim amount
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April 2000
Appendix A
Slide 7-3-3

UNIT 7: INFORMATION RESOURCES

ANATOMY OF A CLAIM

- Report of loss
- Proof of loss filed (POL) within 60 days
- Company responds to POL within 30 days
- Company rejects or accepts claim

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UNIT 7: INFORMATION RESOURCES

CASH VALUE

- Actual
  - Replacement cost less depreciation
- Replacement
  - Cost to replace with like kind and value

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UNIT 7: INFORMATION RESOURCES

RED FLAGS-BUSINESSES

- Inflated inventories
- Recent changes in insurance
- Business interruption
- Obsolete stock
- Sell business to insurance company
- Bankruptcies

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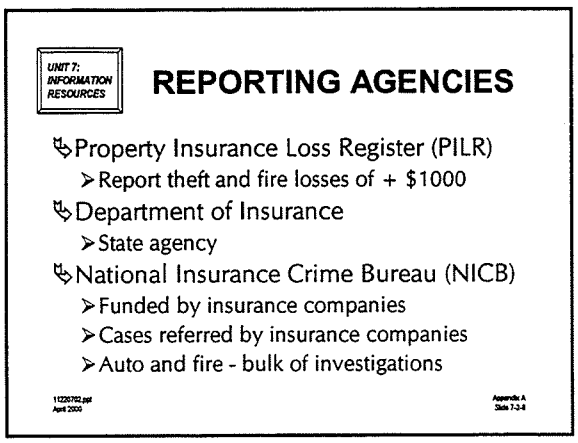
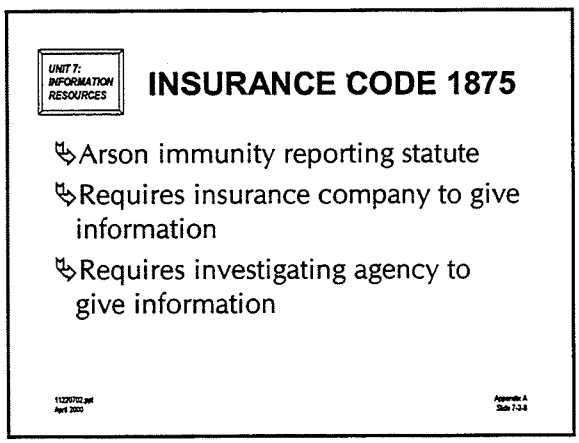
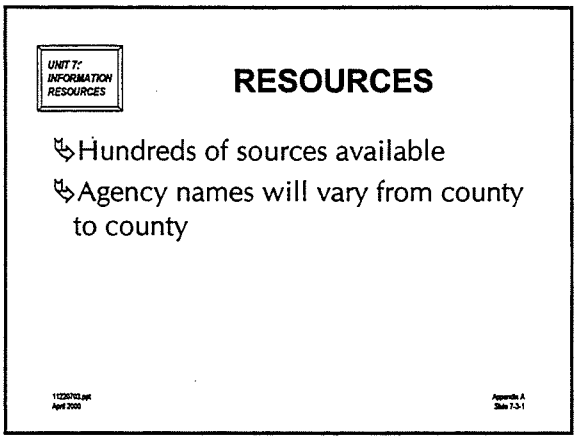
UNIT 7: INFORMATION RESOURCES
RED FLAGS-RESIDENCES
Missing irreplaceable items
Family photo's
Collections
Pets


UNIT 7: INFORMATION RESOURCES
REPORTING AGENCIES
Property Insurance Loss Register (PILR)
Report theft and fire losses of + $1000
Department of Insurance
State agency
National Insurance Crime Bureau (NICB)
Funded by insurance companies
Cases referred by insurance companies
Auto and fire - bulk of investigations


UNIT 7: INFORMATION RESOURCES
INSURANCE CODE 1875
Arson immunity reporting statute
Requires insurance company to give information
Requires investigating agency to give information


UNIT 7: INFORMATION RESOURCES
RESOURCES
Hundreds of sources available
Agency names will vary from county to county
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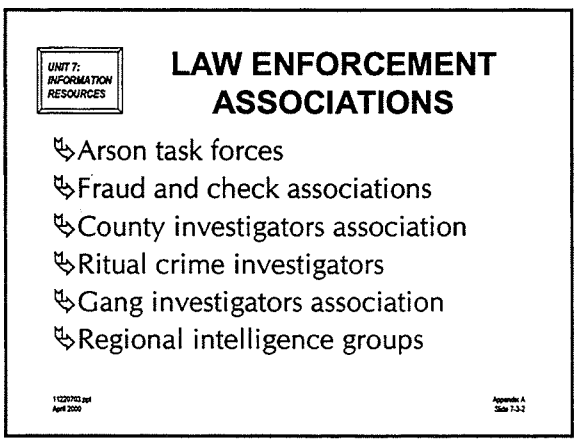
Slide 7-3-1


UNIT 7: INFORMATION RESOURCES
LAW ENFORCEMENT ASSOCIATIONS
Arson task forces
Fraud and check associations
County investigators association
Ritual crime investigators
Gang investigators association
Regional intelligence groups
1122070.ppt
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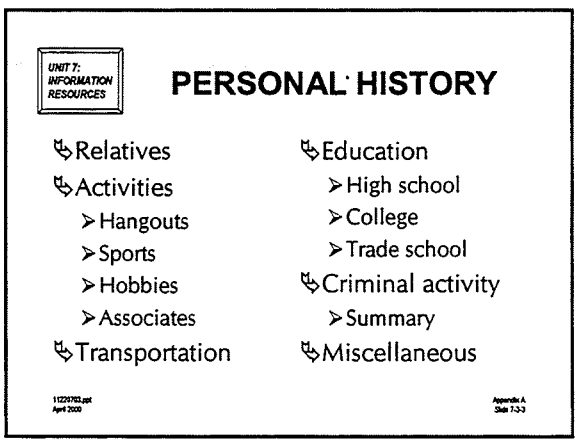
UNIT 7: INFORMATION RESOURCES
PERSONAL HISTORY
Relatives
Activities
Hangouts
Sports
Hobbies
Associates
Transportation
Education
High school
College
Trade school
Criminal activity
Summary
Miscellaneous
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UNIT 7: INFORMATION RESOURCES

CRIMINAL HISTORY

- National Crime Information Center (NCIC)
- California Department of Justice (DOJ)
  - California Law Enforcement Teletype System (CLETS)
  - Arson Information Reporting System (AIRS)

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UNIT 7: INFORMATION RESOURCES

CRIMINAL HISTORY

- Local records
  - Task forces
  - Police/sheriff department
  - Fire department
  - District attorney

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UNIT 7: INFORMATION RESOURCES

STATE AGENCIES

- California Department of Forestry and Fire Protection/Office of State Fire Marshal
- California Department of Insurance - Bureau of Fraudulent Claims
- Department of Motor Vehicles
- California Youth Authority (CYA)/California Department of Corrections
- State Parole
- California Department of Justice

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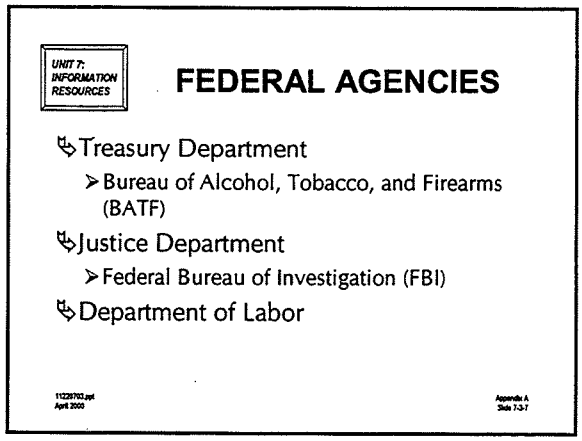
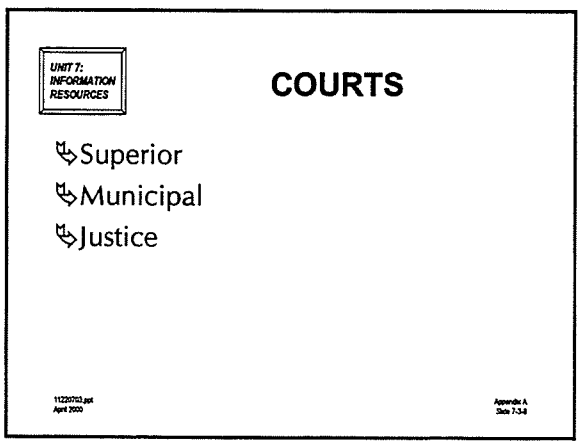
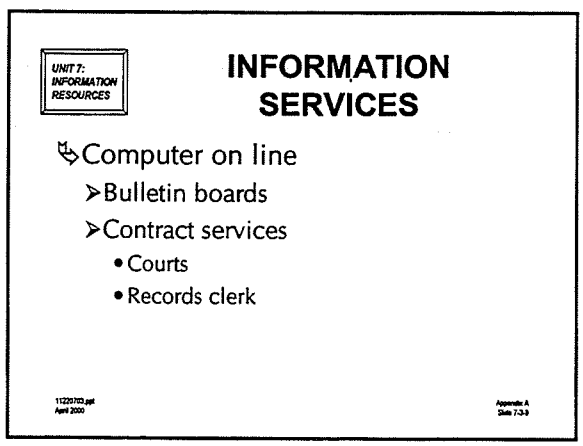

UNIT 7: INFORMATION RESOURCES
FEDERAL AGENCIES
Treasury Department
Bureau of Alcohol, Tobacco, and Firearms (BATF)
Justice Department
Federal Bureau of Investigation (FBI)
Department of Labor


UNIT 7: INFORMATION RESOURCES
COURTS
Superior
Municipal
Justice


UNIT 7: INFORMATION RESOURCES
INFORMATION SERVICES
Computer on line
Bulletin boards
Contract services
Courts
Records clerk

UNIT 7: INFORMATION RESOURCES

INFORMATION SERVICES

- Insurance industry
  - National Insurance Crime Bureau (NICB)
  - Property Insurance Loss Register System (PILR)
  - Insurance investigator, adjuster, and agent
- County agency records
- State agency records

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UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

CASE NO:			VIOLATION:						
Subject's Name			Home Address			City, State, Zip			
Work Phone:			Home Phone:			Cellular/Pager:			
Sex:	D.O.B.	P.O.B.	HT.	WT.	HAIR:	EYES:	RACE:		
Driver's Lic. No.			SS No.		PD/SO No.	CI No.		FBI. NO.	
1-Vehicle-Year Make			Model		Color	Lic. No:		State:	
2-									

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UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

SPOUSE NAME	D.O.B.	HT.	WT.	HAIR:	EYES:	RACE:	
RELATIVE-NAME:	ADDRESS:				PHONE:		
SUBJECT EMPLOYMENT:	ADDRESS:				PHONE:		
PREVIOUS EMPLOYER:	ADDRESS:				PHONE:		
SPOUSE EMPLOYMENT:	ADDRESS:				PHONE:		
PREVIOUS EMPLOYER:	ADDRESS:				PHONE:		

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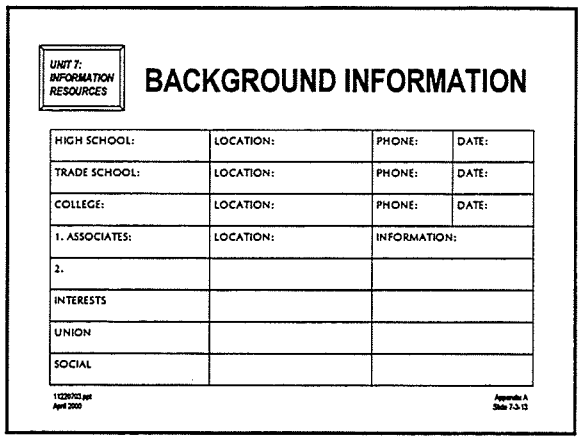

UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

HIGH SCHOOL:	LOCATION:	PHONE:	DATE:
TRADE SCHOOL:	LOCATION:	PHONE:	DATE:
COLLEGE:	LOCATION:	PHONE:	DATE:
1. ASSOCIATES:	LOCATION:	INFORMATION:	
2.			
INTERESTS			
UNION			
SOCIAL			

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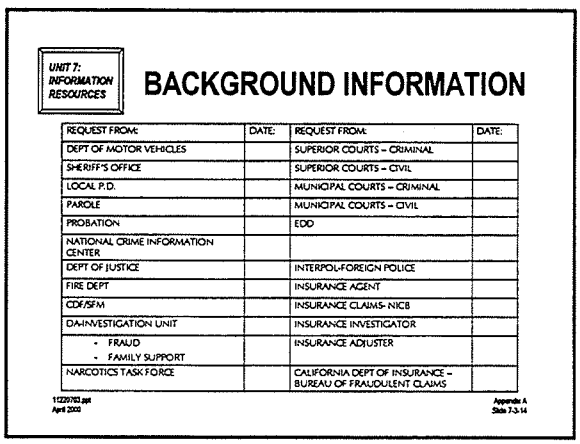

UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

REQUEST FROM:	DATE:	REQUEST FROM:	DATE:
DEPT OF MOTOR VEHICLES		SUPERIOR COURTS – CRIMINAL	
SHERIFF'S OFFICE		SUPERIOR COURTS – CIVIL	
LOCAL P.D.		MUNICIPAL COURTS – CRIMINAL	
PAROLE		MUNICIPAL COURTS – CIVIL	
PROBATION		EDD	
NATIONAL CRIME INFORMATION CENTER			
DEPT OF JUSTICE		INTERPOL-FOREIGN POLICE	
FIRE DEPT		INSURANCE AGENT	
CDF/SFM		INSURANCE CLAIMS- NICB	
DA-INVESTIGATION UNIT		INSURANCE INVESTIGATOR	
- FRAUD - FAMILY SUPPORT		INSURANCE ADJUSTER	
NARCOTICS TASK FORCE		CALIFORNIA DEPT OF INSURANCE – BUREAU OF FRAUDULENT CLAIMS	

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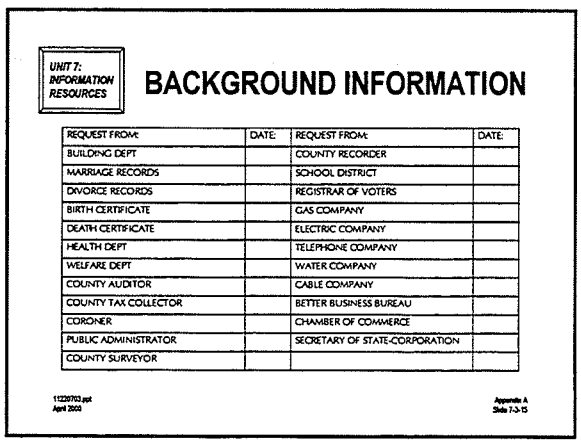

UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

REQUEST FROM:	DATE:	REQUEST FROM:	DATE:
BUILDING DEPT		COUNTY RECORDER	
MARRIAGE RECORDS		SCHOOL DISTRICT	
DIVORCE RECORDS		REGISTRAR OF VOTERS	
BIRTH CERTIFICATE		GAS COMPANY	
DEATH CERTIFICATE		ELECTRIC COMPANY	
HEALTH DEPT		TELEPHONE COMPANY	
WELFARE DEPT		WATER COMPANY	
COUNTY AUDITOR		CABLE COMPANY	
COUNTY TAX COLLECTOR		BETTER BUSINESS BUREAU	
CORONER		CHAMBER OF COMMERCE	
PUBLIC ADMINISTRATOR		SECRETARY OF STATE-CORPORATION	
COUNTY SURVEYOR			

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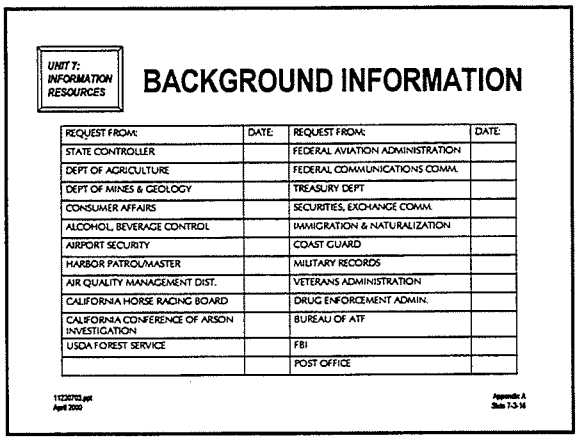

UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

REQUEST FROM:	DATE:	REQUEST FROM:	DATE:
STATE CONTROLLER		FEDERAL AVIATION ADMINISTRATION	
DEPT OF AGRICULTURE		FEDERAL COMMUNICATIONS COMM.	
DEPT OF MINES & GEOLOGY		TREASURY DEPT	
CONSUMER AFFAIRS		SECURITIES, EXCHANGE COMM.	
ALCOHOL, BEVERAGE CONTROL		IMMIGRATION & NATURALIZATION	
AIRPORT SECURITY		COAST GUARD	
HARBOR PATROL/MASTER		MILITARY RECORDS	
AIR QUALITY MANAGEMENT DIST.		VETERANS ADMINISTRATION	
CALIFORNIA HORSE RACING BOARD		DRUG ENFORCEMENT ADMIN.	
CALIFORNIA CONFERENCE OF ARSON INVESTIGATION		BUREAU OF ATF	
USDA FOREST SERVICE		FBI	
		POST OFFICE	

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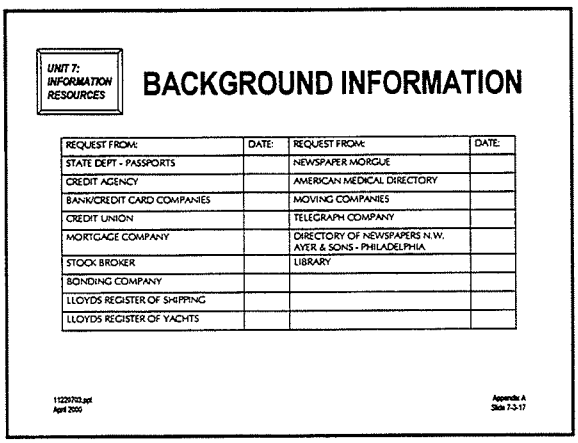
Slide 7-3-16



UNIT 7: INFORMATION RESOURCES

BACKGROUND INFORMATION

REQUEST FROM:	DATE:	REQUEST FROM:	DATE:
STATE DEPT - PASSPORTS		NEWSPAPER MORGUE	
CREDIT AGENCY		AMERICAN MEDICAL DIRECTORY	
BANK/CREDIT CARD COMPANIES		MOVING COMPANIES	
CREDIT UNION		TELEGRAPH COMPANY	
MORTGAGE COMPANY		DIRECTORY OF NEWSPAPERS N.W. AYER & SONS - PHILADELPHIA	
STOCK BROKER		LIBRARY	
BONDING COMPANY			
LLOYDS REGISTER OF SHIPPING			
LLOYDS REGISTER OF YACHTS			

1122070Z3.ppt
April 2000

Appendix A
Slide 7-3-17

UNIT 7: INFORMATION RESOURCES

CONSTRUCTION DRAWINGS

- An aid in reconstructing the scene
- Locating of firewalls, exits, electrical, HVAC, etc.
- An aid in preparing a schematic drawing for the investigative report
- An aid in determining and understanding fire spread characteristics

1122APPA.ppt
April 2000

Appendix A
Slide 7-A-1

UNIT 7: INFORMATION RESOURCES

DRAWING VIEWS

- Plan View
  - Site Plan
  - Floor Plan
- Elevation View
- Section View
- Detail View
- Electrical Plan

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Appendix A
Slide 7-A-2

UNIT 7: INFORMATION RESOURCES

DRAWING VIEWS

- Reflected Ceiling Drawings
- HVAC (mechanical)
- Plumbing Drawings
- Schedules
  - Door
  - Window

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April 2000

Appendix A
Slide 7-A-3

UNIT 7: INFORMATION RESOURCES

OTHER DRAWINGS

- Sprinkler/Standpipe System
- Fire/Burglar Alarm System
- Hood Extinguishing System
- Specialized
  - Design and installation of equipment
  - Layout of stock and merchandising

1122070A.ppt
April 2000
Appendix A
Slide 7-4-4

UNIT 7: INFORMATION RESOURCES

CONSTRUCTION TYPES

- TYPE I Fire Resistive
- TYPE II Noncombustible
- TYPE III Ordinary
- TYPE IV Heavy Timber
- TYPE V Wood Frame

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April 2000
Appendix A
Slide 7-4-5

UNIT 7: INFORMATION RESOURCES

FEATURES THAT AFFECT FIRE SPREAD

- Interior Finishes
- Concealed Spaces
- Breaches
- High-Rise

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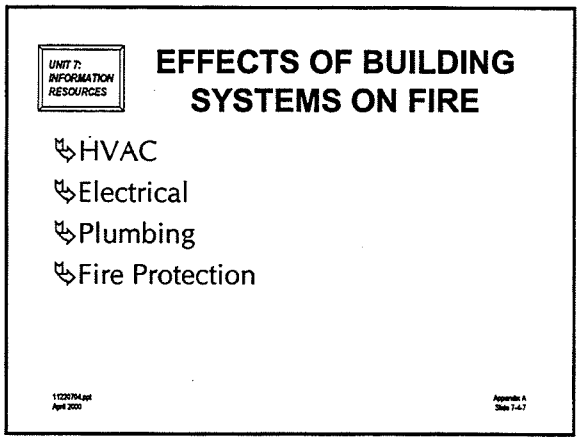
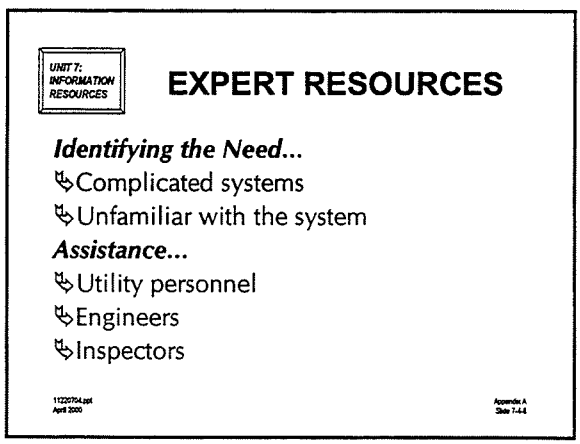
April 2000
Appendix A
Slide 7-4-6


UNIT 7: INFORMATION RESOURCES
EFFECTS OF BUILDING SYSTEMS ON FIRE
HVAC
Electrical
Plumbing
Fire Protection
1122704.ppt
April 2000
Appendix A
Slide 7-A-7


UNIT 7: INFORMATION RESOURCES
EXPERT RESOURCES
Identifying the Need...
Complicated systems
Unfamiliar with the system
Assistance...
Utility personnel
Engineers
Inspectors
1122704.ppt
April 2000
Appendix A
Slide 7-A-8