

FIRE INVESTIGATOR

SCENE EXAMINATION

1. **Demonstrate securing a fire ground/scene so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and evidence or potential evidence is protected from damage or destruction.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.1
NFPA 921, 2014, Chapters 1.1, 1.2, 4.3, 13.2.5.2, 17.3.4.1, 29.5.2.4.1

CONDITION: Given marking or barrier devices (i.e., tape, cones, or rope), special tools or equipment that would assist in establishing a perimeter.

COMPETENCE:

- Assess fire/explosion scene.
- Determine initial scope and purpose of investigation.
- Determine the size of the perimeter that is to be established.
- Set up barrier devices.
- Determine entry/exit point.

TIME: 5:00 Minutes

2. **Conduct an exterior survey so that evidence is preserved, fire damage is interpreted, hazards are identified, accessibility to the property is determined and all potential means of ingress and egress are discovered.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.2
NFPA 921, 2014, Chapters 13.1.2, 15.4.2, 15.4.3, 17.2.1, 17.3.1, 29.5.2.1

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Assess fire ground for safety hazards.
- Assess structural condition of building.
- Observe and identify exterior damage and effects of the fire.
- Identify and mark any evidence or potential evidence found on the exterior of the fire scene.
- Determine entry/exit point for scene.
- Control access into perimeter with police or firefighter if possible.

TIME: 10:00 Minutes

3. **Conduct an interior survey so that areas of potential evidentiary value requiring further examination are identified and preserved, the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.3
NFPA 921, 2014, Chapters 13.1, 15.4.2, 15.4.3, 17.2.1, 17.3.1, 18.3.1,
29.5.2.1

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Assess fire ground for safety hazards.
- Assess structural condition of building.
- Observe and identify interior damage and effects of the fire.
- Identify areas that require additional investigation.
- Determine entry/exit point for scene.
- Control access into perimeter with police or firefighter if possible.

TIME: 10:00 Minutes

4. **Interpret burn patterns so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.4
NFPA 921, 2014, Chapter 6

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and structural or content remains.

COMPETENCE:

- Identify the material involved in fire.
- Identify movement and intensity patterns.
- Identify plume generated patterns.
- Identify ventilation generated patterns.
- Identify hot-gas layer generated patterns.
- Identify full-room involvement patterns.
- Identify burn patterns on horizontal surfaces.

TIME: 10:00 Minutes

5. Correlate burn patterns so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized and all areas of origin are correctly identified.

REFERENCE: NFPA 1033, 2014 Edition, 4.2.5
NFPA 921, 2014, Chapters 6 & 18

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and some structural or content remains.

COMPETENCE:

- Interpret variations of burn pattern on different materials.
- Contrast and compare burn patterns to determine their relevance to fire spread. (Eliminate patterns caused by suppression activities).
- Identify and use two or more fire patterns to determine area of origin.
- Identify area of low burn. (Eliminate false origin areas).
- Identify and summarize area of fire origin and fire development scenario.

TIME: 10:00 Minutes

6. Examine and remove fire debris so that all debris is checked for fire cause evidence, the potential ignition source(s) is identified and evidence is preserved without investigator inflicted damage or contamination.

REFERENCE: NFPA 1033, 2014 Edition, 4.2.6
NFPA 921, 2014, Chapters 17, 18, & 19, 21.2

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and some structural or content remains.

COMPETENCE:

- Determine area to remove debris.
- Determine debris to be removed.
- Remove debris in systematic process, examine and facilitate documentation.
- Identify ignition source(s).
- Identify first fuel(s) ignited.
- Determine (to reasonable degree of certainty) the circumstances that brought the fuel and the ignition source together (fire cause).
- Describe the appropriate preservation of evidence.

TIME: 10:00 Minutes

7. **Reconstruct the area of origin so that all protected areas and burn patterns are identified and correlated to contents or structural remains, items potentially critical to cause determination and photo documentation are returned to their pre-fire location and the area(s) or point(s) of origin is discovered.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.7
NFPA 921, 2014, Chapters 17, 18.3.2, 18.3.2.1, & 19, 21.2

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and some structural or content remains.

COMPETENCE:

- Re-create the scene with contents in their pre-fire location.
- Document fire growth patterns.
- Identify and document potential ignition sources.
- Identify and document first material ignited (if possible).
- Document and collect evidence.

TIME: 10:00 Minutes

8. **Inspect the performance of building systems including detection, suppression, HVAC, utilities and building compartmentalization so that a determination can be made as to the need for expert resources, an operating systems impact on fire growth and spread is considered in identifying origin areas, defeated and/or failed systems are identified and the system's potential as a fire cause is recognized.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.8
NFPA 921, 2014, Chapters 7, 9, 10, & 17

CONDITION: Given example(s) of equipment, standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Identify which type(s) of building system(s) are present in a structure.
- Identify which systems are present in the area of origin.
- Determine if system(s) functioned properly.
- Determine if system(s) impacted fire behavior, growth or extension.
- Document system(s) identified.
- Contact "expert" resources if needed.

TIME: 10:00 Minutes

9. **Discriminate the effects of explosions from other types of damage so that an explosion is identified and its evidence is preserved.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.9
NFPA 921, 2014, Chapter 23

CONDITION: Given a scenario and standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Identify explosive effects on glass, walls, foundations, and other building materials.
- Distinguish between low-and high-order explosion effects.
- Examine scene and area of origin.
- Document items of evidence in area of origin and blast zone.

TIME: 10:00 Minutes

DOCUMENTING THE SCENE

10. **Diagram the scene so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and origin area(s) or point(s) are identified.**

REFERENCE: NFA 1033, 2014 Edition, 4.3.1
NFA 921, 2014, Chapters 6, 16, 17 & 18

CONDITION: Given a scenario, standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Sketch plot and floor plan of fire building.
- Sketch layout of the fire scene.
- Identify location of furniture and other contents.
- Identify area/points of origin.
- Identify burn patterns, fire travel paths, smoke patterns and travel.
- Identify fire detection or suppression systems and devices.
- Identify location of evidence.
- Document scene on agency forms.

TIME: 30:00 Minutes

11. **Photographically document the scene so that the scene is accurately depicted and the photographs support scene findings.**

REFERENCE: NFA 1033, 2014 Edition, 4.3.2
NFA 921, 2014, Chapter 16.2

CONDITION: Given standard photographic equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Establish a photo log so that all shots taken can be identified and accounted for.
- Identify the camera used, indicate on camera (film/disc): name of investigator, time, date and location of incident.
- Begin on the outside of the fire building, establish the location of the scene, landmarks, and building as it sets in relationship to street.
- Photograph any evidence found on outside of structure.
- Photograph burn patterns on outside of structure.
- Photograph interior rooms in proximity to the fire room that was impacted by the fire.
- Photograph area/points of origin before, during, and at conclusion of investigative process.

TIME: 30:00 Minutes

12. **Construct investigative notes so that the notes are accurate, provide further documentation of the scene, and represent complete documentation of the scene findings.**

REFERENCE: NFPA 1033, 2014 Edition, 4.3.3
NFPA 921, 2014, Chapters 16.3, 16.4

CONDITION: Given available documents (i.e., pre-fire plans, inspection reports and interview information), standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Select correct form or use appropriate document for investigative notes.
- Identify date, time, investigator, and location.
- Record facts and actual observations related to the fire scene.
- Be complete, avoid inclusion of personal comments or opinions.
- Use a systematic and consistent method when writing field notes.
- Establish a case file for incident.

TIME: 30:00 Minutes

EVIDENCE COLLECTION / PRESERVATION

13. **Utilize proper procedures for managing victims and fatalities so that all evidence is discovered and preserved and protocol procedures are followed.**

REFERENCE: NFPA 1033, 2014 Edition, 4.4.1
NFPA 921, 2014, Chapter 25.6

CONDITION: Given a scenario, protocol and appropriate personnel.

COMPETENCE:

- Identify victim(s) and or fatalities.
- Secure the scene.
- Notify appropriate agencies (i.e. law enforcement, county attorney, medical examiner, and state fire marshal's office).
- Establish lead investigator/case manager.
- Conduct investigation utilizing unified command structure.

TIME: 10:00 Minutes

14. Locate, collect, and package evidence so that evidence is identified, preserved, collected, and packaged to avoid contamination and investigator inflicted damage and the chain of custody is established.

REFERENCE: NFPA 1033, 2014 Edition, 4.4.2
NFPA 921, 2014, Chapter 17

CONDITION: Given a scenario, standard or special tools and equipment and evidence collection materials.

COMPETENCE:

- Identify evidence to be collected.
- Document specific location of the item at the scene.
- Photograph shows the evidence as it was found and its relationship to other items.
- Document a description of the evidence and any unique markings or labeling.
- Document date, time and location the evidence was collected.
- Identify the investigator who located the evidence and removed it from the scene.
- Demonstrate proper evidence collection method to avoid cross contamination.

TIME: 20:00 Minutes

15. Select evidence for analysis so that items for analysis support specific investigative needs.

REFERENCE: NFPA 1033, 2014 Edition, 4.4.3
NFPA 921, 2014, Chapters 16, 17

CONDITION: Given information from the investigative file.

COMPETENCE:

- Determine location and size of sample to be taken.
- Select appropriate tool to collect sample with and appropriate container to place sample in.
- Collect sample and place in container.
- Determine location and size of comparison sample to be taken.
- Select appropriate tool to collect comparison sample with and appropriate container to place comparison sample in.
- Collect comparison sample and place in container.
- Document (photograph and description) of sample location, time, date, investigator and incident number on container.
- Maintain chain of custody for samples.

TIME: 20:00 Minutes

10. maintain a chain of custody so that written documentation exists for each piece of evidence and evidence is secured.

REFERENCE: NFPA 1033, 2014 Edition, 4.4.4
NFPA 921, 2014, Chapters 17.5, 17.6, 17.7, 17.9

CONDITION: Given standard investigative tools, marking tools, and evidence tags or logs.

COMPETENCE:

- Collect evidence sample at scene.
- Identify evidence on log sheet.
- Document and maintain security of evidence.
- Document each time evidence changes custody.
- Maintain evidence log as part of incident related documentation.

TIME: 10:00 Minutes

17. Dispose of evidence so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.

REFERENCE: NFPA 1033, 2014 Edition, 4.4.5
NFPA 921, 2014, Chapters 17.11

CONDITION: Given jurisdictional regulations and file information.

COMPETENCE:

- Receive proper authorization and documentation to dispose of evidence.
- Return evidence to rightful owner as applicable.
- Dispose of evidence as directed by agency requirements that are not harmful to the investigator or the environment.
- Document the disposal of the evidence.

TIME: 10:00 Minutes

INTERVIEW

18. Develop an interview plan so that the plan reflects a strategy to further determine the fire cause and affix responsibility and includes a relevant questioning strategy for each individual to be interviewed that promotes the efficient use of the investigator's time.

REFERENCE: NFPA 1033, 2014 Edition, 4.5.1
NFPA 921, 2014, Chapters 14.1, 14.4

CONDITION: Given a scenario and person(s) for interviewing.

COMPETENCE:

- Gather pertinent and accurate information.
- Obtain information that corroborates or refutes the investigative data.
- Assist in the determination of the fire origin, cause and affixing responsibility.
- Identify who is to be interviewed as part of the investigation.
- Separate parties to be interviewed to different locations.
- Determine location to conduct interviews.

TIME: 30:00 Minutes

19. **Conduct interviews so that pertinent information is obtained, follow-up questions are asked, responses to all questions are elicited, and the response to each question is documented accurately.**

REFERENCE: NFPA 1033, 2014 Edition, 4.5.2
NFPA 921, 2014, Chapters 14.1, 14.4

CONDITION: Given a scenario, and incident information.

COMPETENCE:

- Investigator introduces themselves.
- Investigator should positively identify the person being interviewed and document them by: name, SSN, DOB, Address, home and work phone number and a physical description.
- Investigator should document time, date and location of interview.
- Investigator should outline purpose of the interview.
- During interview, investigator should remain calm, professional, positive and focused.
- Investigator should asked "open-ended questions".
- Document all responses to questions, note any discrepancies, note nonverbal indicators, and general impressions of the interviewee.
- Close the interview and allow the interviewee a chance to provide any additional information.

TIME: 30:00 Minutes

20. **Evaluate interview information so that all interview data is individually analyzed and correlated with all other interviews, corroborative and conflictive information is documented, and new leads are discovered.**

REFERENCE: NFPA 1033, 2014 Edition, 4.5.3
NFPA 921, 2014, Chapter 12

CONDITION: Given a scenario, interview transcripts or notes and incident data.

COMPETENCE:

- Organize and analyze all information collected.
- Identify any gaps in the investigative data.
- Based on interview, identify any other persons to be interviewed.
- Based on interview, analyze information provided by various individuals interviewed and judge the reliability of information.
- Document analysis of information.

TIME: 30:00 Minutes

POST-INCIDENT INVESTIGATION

21. **Gather reports and records so that all gathered documents are applicable to the investigation, complete, and authentic; the chain of custody is maintained, and the material is admissible in a legal proceeding.**
- REFERENCE: NFPA 1033, 2014 Edition, 4.6.1
NFPA 921, 2014, Chapters 12, 16, 17.9
- CONDITION: Given a scenario and appropriate documents.
- COMPETENCE:
- Gather all applicable reports, photos, videos, and interviews.
 - Ensure and document chain of custody.
 - Organize investigation file for reference.
- TIME: 20:00 Minutes
22. **Evaluate the investigative file so that areas for further investigation are identified, the relationship between gathered documents and information is interpreted and corroborative evidence and information discrepancies are discovered.**
- REFERENCE: NFPA 1033, 2014 Edition, 4.6.2
NFPA 921, 2014, Chapters 12, 17.10, 21, 29
- CONDITION: Given a scenario, all available fire information.
- COMPETENCE:
- Determine status of case (i.e. active/inactive).
 - Identify areas needing further investigation.
 - Coordinate with other agencies to determine possible links or similarities.
- TIME: 20:00 Minutes
23. **Coordinate expert resources so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigation toward the goals of causation determination or affixing responsibility.**
- REFERENCE: NFPA 1033, 2014 Edition, 4.6.3
NFPA 921, 2014, Chapters 15.5, 15.6, 29.3, 29.4
- CONDITION: Given a scenario, investigative file, reports and documents.
- COMPETENCE:
- Identify the need and type of an expert witness.
 - Identify potential expert witnesses for investigation.
 - Determine experts' qualifications.
 - Interview expert to determine ability to support investigation.
 - Determine budget to support use of expert witness.
- TIME: 20:00 Minutes

24. Establish evidence as to motive and/or opportunity so that the evidence is supported by documentation and meets the evidentiary requirements of the jurisdiction.

REFERENCE: NFPA 1033, 2014 Edition, 4.6.4
NFPA 921, 2014, Chapters 15, 16, 17, 24

CONDITION: Given a scenario.

COMPETENCE:

- Identify motives for setting incendiary fires.
- Evaluate corresponding documents for suspect motives and or opportunities.

TIME: 20:00 Minutes

25. Formulate an opinion of the person(s) and/or product(s) responsible for the fire so that the opinion regarding responsibility for a fire is supported by the records, reports, documents, and evidence.

REFERENCE: NFPA 1033, 2014 Edition, 4.6.5
NFPA 921, 2014, Chapter 21

CONDITION: Given a scenario and all investigative findings.

COMPETENCE:

- Review data and test hypothesis against data.
- Formulate and document conclusion of case.

TIME: 10:00 Minutes

PRESENTATIONS

26. Prepare a written investigation report so that the report accurately reflects the investigative findings, is concise, expresses the investigator's opinion, and meets the needs or requirement for the intended audience(s).

REFERENCE: NFPA 1033, 2014 Edition, 4.7.1
NFPA 921, 2014, Chapter 15

CONDITION: Given a scenario, investigative findings, documentation, and a specific audience.

COMPETENCE:

- Prepare a written report that is:
 - 1- Concise with correct grammar and spelling.
 - 2- Reflects the investigative process.
 - 3- Reflects the investigator findings.
- Report written for intended audience.

TIME: 30:00 Minutes

27. **Express investigative findings verbally so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need to know information for the intended audience.**

REFERENCE: NFPA 1033, 2014 Edition, 4.7.2
NFPA 921, 2014, Chapters 11.4, 11.5

CONDITION: Given a scenario, investigative findings, notes, a time allotment and a specific audience.

COMPETENCE:

- Verbally communicate report to intended audience.
- Focus on facts and relevant information.
- Complete in allotted time.

TIME: 10:00 Minutes

28. **Testify during legal proceedings so that all pertinent investigative information and evidence is presented clearly and accurately, and the investigator's demeanor and attire are appropriate to the proceedings.**

REFERENCE: NFPA 1033, 2014 Edition, 4.7.3
NFPA 921, 2014, Chapter 11, Annex 11.5.1, ~~Kirks-670~~

CONDITION: Given a scenario, investigative findings, contents of reports, and consultation with legal counsel.

COMPETENCE:

- Identify different types of legal proceedings.
- Review case file prior to testimony.
- Arrive on time to proceeding.
- Dress appropriately.
- Communicate in professional, concise, and accurate manner.
- Respond to questions with pertinent information as it relates to the case.

TIME: 10:00 Minutes

29. **Conduct public informational presentations so that information is accurate, appropriate to the audience, and clearly supports the information needs of the audience.**

REFERENCE: NFPA 1033, 2014 Edition, 4.7.4
APPENDIX

CONDITION: Given a scenario, relative data.

COMPETENCE:

- Gather and organize information,
- Set time, date, and location for presentation.
- Determine audience needs.
- Dress appropriately.
- Give the information clearly, accurately and concisely.
- Answer appropriate questions if necessary.

TIME: 10:00 Minutes