

Fire Investigation Independent Study Continuing Education

NFPA 921 UNIT #14 – Study Guide

NFPA 921 Guide for Fire and Explosion Investigations 2004 Edition

Objective: Given an examination the participant shall demonstrate a knowledge and understanding of origin determination.

Reading/study assignment: NFPA 921 Guide for Fire and Explosion Investigations, 2004 Edition, pp. 921-131 through 921-137 (Chapter 17)

Study/reference questions:

What is an electrical arc survey?

How should debris removal be accomplished?

Should a total burn be investigated? Why?

What should the fire investigator look for in reference to contents fire scene reconstruction?

What are benefits of fire scene reconstruction?

If the contents item location cannot be definitely determined, what should be done? Why?

If the origin of a fire cannot be determined, how does this affect cause determination?

What may be learned concerning the structural exterior during origin determination?

What may prevent the investigator from tracing electrical circuit wiring back to the panel?

How is the area of origin determined and how does this assist the fire investigator?

What is learned from the preliminary interior assessment?

What does the recommended procedure for fire scene investigation consist of?

What aspects should be considered by the fire investigator during the investigation?

What should the fire investigator's notes include?

What should be included in the photo documentation of the fire scene?

What are vector diagrams, how are they used, and how may they assist the fire investigator?

Origin determination involves coordination of what information?

How are heat source/source of heat and origin of the fire related?

What are depth-of-char survey grid diagrams? How may they assist the fire investigator?

Can a fire origin always be positively determined and what should be done about this?

What is the primary purpose of the preliminary interior assessment?

What is the purpose of the initial examination, what should be done, and how may this assist the fire investigator?

What should be noted in the pre-fire conditions detailed interior examination? What areas should be noted?

Is electrical arc surveying and identification of arcs always possible? Why or why not?

Why and what should be considered concerning the weather?

What does fire damage assessment include?

What should be done concerning the structural exterior during origin determination?

What rooms should be examined on the structural interior?

What does the location of items within a total burn indicate for the fire investigator?

Can a single item or witness be the basis for a conclusive origin determination?

What type procedure should the fire investigator use? Why?

What should be observed, noted, and compared during and interior structural examination?

Why should the surrounding areas be examined at a fire scene and what may be included?

What is a preliminary scenario development and how is it used?

What do stained surfaces around a door indicate?

What precaution must be considered with the preliminary scenario development?

What is the purpose of the detailed exterior surface examination?

How may a detailed exterior surface examination assist the fire investigator?

What items should be included in the pre-fire conditions of the detailed exterior examination and when should they be documented?

What should the fire investigator do concerning the utilities?

What should the fire investigator do with the preliminary scenario development?

What should the fire investigator document in reference to doors and windows?

What may condition of windows and glass indicate for the fire investigator?

What should the fire investigator look for in reference to exterior examination explosion evidence?

What do clean surfaces around a door indicate?

What fire damage should be noted by the fire investigator? What does this indicate?

Is debris removal necessary? Why?

Why are structural holes of fire suppression activities of interest to the fire investigator?

When should a detailed interior surface examination be done?

If the fire investigator is sure the fire did not start inside the structure does a detailed interior examination need to be completed? Why?

What utilities should be identified and documented? How may they be documented?

Can fires cause gas systems to leak?

When doing a detailed interior examination what should the fire investigator look for concerning an explosion?

What should the fire investigator try to determine in reference to an explosion while conducting a detailed interior surface examination? What indicators would you look for?

What is the purpose of the fire scene reconstruction?

If the fire investigator is sure the fire started inside the structure does a detailed exterior examination need to be completed?

What must a fire investigator do concerning a witness statement when no area of origin can be determined from a fire scene scenario?

What may assist the fire investigator in fire scene reconstruction?

What are safety concerns and risks associated with fire scene reconstruction?

How does debris removal by fire crews affect the investigation? When should this debris removal be done, if possible?

What is the purpose of the fire spread scenario?

What should be done when an area of origin is located during the development of a fire spread scenario? What if an area of origin cannot be determined?

What are fire models? How should they be used? Who should use them?

What should the fire investigator do concerning contradictions to a fire spread scenario?

What information should be obtained in reference to a total burn? Where and how would you obtain this information?

What should the fire investigator do in reference to contents during fire scene reconstruction?

How should the investigation of a total burn be conducted?

What is the purpose of the examination of the contents of a total burn?