

Department of Public Safety Standards and Training

NFPA[®] 1033

Standard for Professional Qualifications for Fire Investigator 2009 Edition

| Task Book Assigned To: | |
|----------------------------------------------|----------------------|
| Name | DPSST Fire Service # |
| Agency Name | Date Initiated |
| Signature of Agency Head or Training Officer | Date Completed |

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<http://oregon.gov/DPSST/FC/index.shtml>

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Task Book Qualification Record Books (Task Book) have been developed for various certification levels within the Oregon Department of Public Safety Standards and Training (DPSST) system. Each Task Book lists the job performance requirements (JPRs) for the specific certification level in a format that allows a candidate to be trained and evaluated during three (3) sequential sessions. Successful performance of all tasks, as observed and recorded by a qualified and approved evaluator will result in the candidate's eligibility for DPSST certification.

To become certified at a specific level, the applicant must successfully complete the job performance requirements in sequence. Before a job performance evaluation can be taken, all requisite knowledge and skills must be satisfied. In addition, all relative task book evaluations must be checked off by the evaluator. When all prescribed requirements have been met, an application for Certification will be forwarded to DPSST. All certificates are mailed to the Training Officer at his/her Fire Service Agency.

NOTE TO FIRE SERVICE AGENCIES: These JPRs serve as general guidelines. As such they are not intended to replace specific sequences of apparatus or equipment operation that may be outlined by manufacturer specifications. At all times, standard operating procedures of the Fire Service Agency in which the evaluation is being conducted will govern. Fire Service Agencies should have available for evaluators a copy of manufacturer specifications and the Fire Service Agencies standard operational guidelines.

The JPRs covered in this Task Book meet or exceed all NFPA published standards for this certification level at the time of this publication. Mention of NFPA and its standards do not, and are not intended as adoption of—or reference to—NFPA standards.

***A vertical line (|) to the left of the document indicates a change from the previous standard.**

Oregon Administrative Rule 259-009-0062

Fire Service Personnel Certification

(B) A Department approved Field Training Officer must monitor the completion of a Task Book. The Field Training Officer must be certified at or above the level being monitored and have at least five (5) years fire investigation experience. Exception: The Department may approve a Field Training Officers with equivalent training, education and experience.

HOW TO EVALUATE PERFORMANCE:

Each JPR has one corresponding box to the right in which to confirm a candidate's success. The evaluator shall indicate successful passing by the candidate of each JPR by initialing and dating (see example).

(B) Requisite Skills. Assess fire ground and structural condition, observe the damage from and effects of the fire, and interpret fire patterns.



NOTE TO CANDIDATE: To receive State of Oregon certification for NFPA Fire Investigator the applicant must hold a valid IAAI Fire Investigator Certification.

–OR– If the applicant does not hold the IAAI Fire Investigator Certification, NAFI Certification or CFEI Certification the applicant must successfully pass the DPSST state written certification examination.

TASK BOOK QUALIFICATION RECORD

FOR THE CERTIFICATION LEVEL OF

NFPA Fire Investigator

Prior to becoming certified in this position, the NFPA Fire Investigator candidate must successfully complete the following Job Performance Requirements (JPR). The evaluator must initial and date the appropriate box to indicate successful completion. For each JPR there are requisite knowledge and skill requirements. The evaluator must initial and date in the box provided to indicate the meeting of those requirements before the firefighter may proceed.

4.1 General.

4.1.1 The fire investigator shall meet the job performance requirements defined in Sections 4.2 through 4.7.

4.1.2 The fire investigator shall employ all elements of the scientific method as the operating analytical process throughout the investigation and for the drawing of conclusions.

4.1.3 Because fire investigators are required to perform activities in adverse conditions, site safety assessments shall be completed on all scenes and regional and national safety standards shall be followed and included in organizational policies and procedures.

4.1.4 The fire investigator shall maintain necessary liaison with other interested professionals and entities.

4.1.5 The fire investigator shall adhere to all applicable legal and regulatory requirements.

4.1.6 The fire investigator shall understand the organization and operation of the investigative team within an incident management system.

4.2 Scene Examination.

Duties shall include inspecting and evaluating the fire scene, or evidence of the scene if the scene is no longer available, so as to determine the area or point of origin, source of ignition, material(s) ignited, and act or activity that brought ignition source and materials together and to assess the subsequent progression, extinguishment, and containment of the fire.

4.2.1 Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and all evidence or potential evidence is protected from damage or destruction.

(A) Requisite Knowledge. Fire ground hazards, types of evidence, and the importance of fire scene security, evidence preservation, and issues relating to spoliation.

(B) Requisite Skills. Use of marking devices.

4.2.2 Conduct an exterior survey, given standard equipment and tools, so that evidence is preserved, fire damage is interpreted, hazards are identified to avoid injuries, accessibility to the property is determined, and all potential means of ingress and egress are discovered.

(A) Requisite Knowledge. The types of building construction and the effects of fire on construction materials, types of evidence commonly found in the perimeter, evidence preservation methods, the effects of fire suppression, fire behavior and spread, fire patterns, and a basic awareness of the dangers of hazardous materials.

(B) Requisite Skills. Assess fire ground and structural condition, observe the damage from and effects of the fire, and interpret fire patterns.

4.2.3 Conduct an interior survey, given standard equipment and tools, 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.

(A) Requisite Knowledge. The types of building construction and interior finish and the effects of fire on those materials, the effects of fire suppression, fire behavior and spread, evidence preservation methods, fire patterns, effects of building contents on fire growth, the relationship of building contents to the overall investigation, weather conditions at the time of the fire, and fuel moisture.

(B) Requisite Skills. Assess structural conditions, observe the damage and effects of the fire, discover the impact of fire suppression efforts on fire flow and heat propagation, and evaluate protected areas to determine the presence and/or absence of contents.

4.2.4 Interpret fire patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

(A) Requisite Knowledge. Fire dynamics, fire development, and the interrelationship of heat release rate, form, and ignitibility of materials.

(B) Requisite Skills. Interpret the effects of burning characteristics on different types of materials.

4.2.5 Interpret and analyze fire patterns, given standard equipment and tools and some structural or content remains, 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.

(A) Requisite Knowledge. Fire behavior and spread based on fire chemistry, fire dynamics, and physics, fire suppression effects, building construction.

(B) Requisite Skills. Interpret variations of fire patterns on different materials with consideration given to heat release rate, form, and ignitibility; distinguish impact of different types of fuel loads; evaluate fuel trails; and analyze and synthesize information.

4.2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, potential ignition source(s) is identified, and evidence is preserved without investigator-inflicted damage or contamination.

(A) Requisite Knowledge. Basic understanding of ignition processes, characteristics of ignition sources, and ease of ignition of fuels; debris-layering techniques; use of tools and equipment during the debris search; types of fire cause evidence commonly found in various degrees of damage; and evidence-gathering methods and documentation.

(B) Requisite Skills. Employ search techniques that further the discovery of fire cause evidence and ignition sources, use search techniques that incorporate documentation, and collect and preserve evidence.

4.2.7 Reconstruct the area of origin, given standard and, if needed, special equipment and tools as well as sufficient personnel, so that all protected areas and fire patterns are identified and correlated to contents or structural remains, items potentially critical to cause determination and photo documentation are returned to their prefire location, and the area(s) or point(s) of origin is discovered.

(A) Requisite Knowledge. The effects of fire on different types of material and the importance and uses of reconstruction.

(B) Requisite Skills. Examine all materials to determine the effects of fire, identify and distinguish among different types of fire-damaged contents, and return materials to their original position using protected areas and fire patterns.

4.2.8 Inspect the performance of building systems, including detection, suppression, HVAC, utilities, and building compartmentation, given standard and special equipment and tools, so that a determination can be made as to the need for expert resources, an operating system's 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.

(A) Requisite Knowledge. Different types of detection, suppression, HVAC, utility, and building compartmentation such as fire walls and fire doors; types of expert resources for building systems; the impact of fire on various systems; common methods used to defeat a system's functional capability; and types of failures.

(B) Requisite Skills. Determine the system's operation and its effect on the fire; identify alterations to, and failure indicators of, building systems; and evaluate the impact of suppression efforts on building systems.

4.2.9 Discriminate the effects of explosions from other types of damage, given standard equipment and tools, so that an explosion is identified and its evidence is preserved.

(A) Requisite Knowledge. Different types of explosions and their causes, characteristics of an explosion, and the difference between low- and high-order explosions.

(B) Requisite Skills. Identify explosive effects on glass, walls, foundations, and other building materials; distinguish between low- and high-order explosion effects; and analyze damage to document the blast zone and origin.

4.3 Documenting the Scene.

Duties shall include diagramming the scene, photographing, and taking field notes to be used to compile a final report.

4.3.1 Diagram the scene, given standard tools and equipment, so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and area(s) or point(s) of origin are identified.

(A) Requisite Knowledge. Commonly used symbols and legends that clarify the diagram, types of evidence and patterns that need to be documented, and formats for diagramming the scene.

(B) Requisite Skills. Ability to sketch the scene, basic drafting skills, and evidence recognition and observational skills.

4.3.2 Photographically document the scene, given standard tools and equipment, so that the scene is accurately depicted and the photographs support scene findings.

(A) Requisite Knowledge. Working knowledge of high-resolution camera and flash, the types of film, media, and flash available, and the strengths and limitations of each.

(B) Requisite Skills. Ability to use a high-resolution camera, flash, and accessories.

4.3.3 Construct investigative notes, given a fire scene, available documents (e.g., prefire plans and inspection reports), and interview information, so that the notes are accurate, provide further documentation of the scene, and represent complete documentation of the scene findings.

(A) Requisite Knowledge. Relationship between notes, diagrams, and photos, how to reduce scene information into concise notes, and the use of notes during report writing and legal proceedings.

(B) Requisite Skills. Data-reduction skills, note-taking skills, and observational and correlating skills.

4.4 Evidence Collection/Preservation.

Duties shall include using proper physical and legal procedures to retain evidence required within the investigation.

4.4.1 Utilize proper procedures for managing victims and fatalities, given a protocol and appropriate personnel, so that all evidence is discovered and preserved and the protocol procedures are followed.

(A) Requisite Knowledge. Types of evidence associated with fire victims and fatalities and evidence preservation methods.

(B) Requisite Skills. Observational skills and the ability to apply protocols to given situations.

4.4.2 Locate, collect, and package evidence, given standard or special tools and equipment and evidence collection materials, so that evidence is identified, preserved, collected, and packaged to avoid contamination and investigator-inflicted damage and the chain of custody is established.

(A) Requisite Knowledge. Types of evidence, authority requirements, impact of removing evidentiary items on civil or criminal proceedings (exclusionary or fire-cause supportive evidence), types, capabilities, and limitations of standard and special tools used to locate evidence, types of laboratory tests available, packaging techniques and materials, and impact of evidence collection on the investigation.

(B) Requisite Skills. Ability to recognize different types of evidence and determine whether evidence is critical to the investigation.

4.4.3 Select evidence for analysis given all information from the investigation, so that items for analysis support specific investigation needs.

(A) Requisite Knowledge. Purposes for submitting items for analysis, types of analytical services available, and capabilities and limitations of the services performing the analysis.

(B) Requisite Skills. Evaluate the fire incident to determine forensic, engineering, or laboratory needs.

4.4.4 Maintain a chain of custody, given standard investigative tools, marking tools, and evidence tags or logs, so that written documentation exists for each piece of evidence and evidence is secured.

(A) Requisite Knowledge. Rules of custody and transfer procedures, types of evidence (e.g., physical evidence obtained at the scene, photos, and documents), and methods of recording the chain of custody.

(B) Requisite Skills. Ability to execute the chain of custody procedures and accurately complete necessary documents.

4.4.5 Dispose of evidence, given jurisdictional or agency regulations and file information, so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.

(A) Requisite Knowledge. Disposal services available and common disposal procedures and problems.

(B) Requisite Skills. Documentation skills.

4.5 Interview.

Duties shall include obtaining information regarding the overall fire investigation from others through verbal communication.

4.5.1 Develop an interview plan, given no special tools or equipment, 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.

(A) Requisite Knowledge. Persons who can provide information that furthers the fire cause determination or the affixing of responsibility, types of questions that are pertinent and efficient to ask of different information sources (first responders, neighbors, witnesses, suspects, and so forth), and pros and cons of interviews versus document gathering.

(B) Requisite Skills. Planning skills, development of focused questions for specific individuals, and evaluation of existing file data to help develop questions and fill investigative gaps.

4.5.2 Conduct interviews, given incident information, 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.

(A) Requisite Knowledge. Types of interviews, personal information needed for proper documentation or follow-up, documenting methods and tools, and types of nonverbal communications and their meaning.

(B) Requisite Skills. Adjust interviewing strategies based on deductive reasoning, interpret verbal and nonverbal communications, apply legal requirements applicable, and exhibit strong listening skills.

4.5.3 Evaluate interview information, given interview transcripts or notes and incident data, so that all interview data is individually analyzed and correlated with all other interviews, corroborative and conflictive information is documented, and new leads are developed.

(A) Requisite Knowledge. Types of interviews, report evaluation methods, and data correlation methods.

(B) Requisite Skills. Data correlation skills and the ability to evaluate source information (e.g., first responders and other witnesses).

4.6 Post-Incident Investigation.

Duties shall include the investigation of all factors beyond the fire scene at the time of the origin and cause determination.

4.6.1 Gather reports and records, given no special tools, equipment, or materials, 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.

(A) Requisite Knowledge. Types of reports needed that facilitate determining responsibility for the fire (e.g., police reports, fire reports, insurance policies, financial records, deeds, private investigator reports, outside photos, and videos) and location of these reports.

(B) Requisite Skills. Identify the reports and documents necessary for the investigation, implement the chain of custody, and organizational skills.

4.6.2 Evaluate the investigative file, given all available file information, 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.

(A) Requisite Knowledge. File assessment and/or evaluation methods, including accurate documentation practices, and requisite investigative elements.

(B) Requisite Skills. Information assessment, correlation, and organizational skills.

4.6.3 Coordinate expert resources, given the investigative file, reports, and documents, so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigative goals of determining cause or affixing responsibility.

(A) Requisite Knowledge. How to assess one's own expertise, qualification to be called for expert testimony, types of expert resources (e.g., forensic, CPA, polygraph, financial, human behavior disorders, and engineering), and methods to identify expert resources.

(B) Requisite Skills. Apply expert resources to further the investigation by networking with other investigators to identify experts, questioning experts relative to their qualifications, and developing a utilization plan for use of expert resources.

4.6.4 Establish evidence as to motive and/or opportunity, given an incendiary fire, so that the evidence is supported by documentation and meets the evidentiary requirements of the jurisdiction.

(A) Requisite Knowledge. Types of motives common to incendiary fires, methods used to discover opportunity, and human behavioral patterns relative to fire-setting.

(B) Requisite Skills. Financial analysis, records gathering and analysis, interviewing, and interpreting fire scene information and evidence for relationship to motive and/or opportunity.

4.6.5 Formulate an opinion concerning origin, cause, or responsibility for the fire, given all investigative findings, so that the opinion regarding origin, cause, or responsibility for a fire is supported by the data, facts, records, reports, documents, and evidence.

(A) Requisite Knowledge. Analytical methods and procedures (e.g., hypothesis development and testing, systems analysis, time lines, link analysis, fault tree analysis, and data reduction matrixing).

(B) Requisite Skills. Analytical and assimilation skills.

4.7 Presentations.

Duties shall include the presentation of findings to those individuals not involved in the actual investigations.

4.7.1 Prepare a written report, given investigative findings, documentation, and a specific audience, so that the report accurately reflects the investigative findings, is concise, expresses the investigator's opinion, contains facts and data that the investigator relies on in rendering an opinion, contains the reasoning of the investigator by which each opinion was reached, and meets the needs or requirements of the intended audience(s).

(A) Requisite Knowledge. Elements of writing, typical components of a written report, and types of audiences and their respective needs or requirements.

(B) Requisite Skills. Writing skills, ability to analyze information and determine the reader's needs or requirements.

4.7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, 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.

(A) Requisite Knowledge. Types of investigative findings, the informational needs of various types of audiences, and the impact of releasing information.

(B) Requisite Skills. Communication skills and ability to determine audience needs and correlate findings.

4.7.3 Testify during legal proceedings, given investigative findings, contents of reports, and consultation with legal counsel, so that all pertinent investigative information and evidence are presented clearly and accurately and the investigator's demeanor and attire are appropriate to the proceedings.

(A) Requisite Knowledge. Types of investigative findings, types of legal proceedings, professional demeanor requirements, and an understanding of due process and legal proceedings.

(B) Requisite Skills. Communication and listening skills and ability to differentiate facts from opinion and determine accepted procedures, practices, and etiquette during legal proceedings.

4.7.4 Conduct public informational presentations, given relevant data, so that information is accurate, is appropriate to the audience, and clearly supports the information needs of the audience.

(A) Requisite Knowledge. Types of data available regarding the fire loss problem and the issues about which the community must know.

(B) Requisite Skills. Ability to assemble, organize, and present information.