

NFPA

1031

**FIRE INSPECTOR,
FIRE INVESTIGATOR AND
FIRE PREVENTION
EDUCATION OFFICER
PROFESSIONAL
QUALIFICATIONS**



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NATIONAL FIRE PROTECTION ASSOCIATION

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See Inside Back Cover for Official NFPA Definitions

National Professional Qualifications System

established by the

Joint Council of National Fire Service Organizations

Constituent Members of the Joint Council of National Fire Service Organizations

Fire Marshals Association of North America

International Association of Arson Investigators

International Association of Black Professional Fire Fighters

International Association of Fire Chiefs

International Association of Fire Fighters

International Fire Service Training Association

International Municipal Signal Association

International Society of Fire Service Instructors

Metropolitan Committee of International Association of Fire Chiefs

National Fire Protection Association

The Joint Council of National Fire Service Organizations consists of leaders of the principal national organizations representing the Fire Service of the United States. It meets periodically to review current developments and to establish areas of common interest where cooperative efforts of member organizations can be used for maximum results.

An important step in the establishment of national standards of professional competence for the fire service was taken by the Joint Council on October 25, 1972.

The Council decided that one area of common interest in which national collective action was desirable was in the establishment of standards upon which the levels of competency within the fire service could be determined.

A committee of the Council was delegated the responsibility of preparing an acceptable system for the development of the standards. Following several months of work, during which the suggestions of constituent organizations were incorporated, the Committee submitted the final proposal to the Joint Council and the following system was approved and established:

1. Committees to develop standards of professional competency, made up of peer group representation; and
2. An independent Board to oversee and validate standards developed and the implementation of such standards in a nationally coordinated continuing professional development program for the fire service.

The Secretariat for Committees and Board is to be provided by the staff of the National Fire Protection Association.

1. Fire Service Professional Standards Development Committees

There are four committees, each of which is made up of representatives of organizations which are constituent members of the Joint Council and certain other persons nominated by the Joint Council, collectively.

The four committees are respectively responsible for the development and preparation of recommended minimum standards of professional competence required of:

1. Fire Fighters
2. Fire Inspectors and Investigators
3. Fire Service Instructors
4. Fire Service Officers.

Each committee is established and operated under NFPA standards making procedures with one important variation, which is that no draft standard shall be submitted to NFPA for final adoption until it has been approved by the National Professional Qualifications Board for the Fire Service.

Standards are prepared for use after final adoption as a basis for nationally standardized examinations by authorized agencies and the standards are available for adoption by federal, state and local authorities.

Committees do not determine, or become involved in, actual certification procedures or the direct implementation of the standards; they do assist implementing agencies by a continuing review and revision of the standards.

The authorized representation on each committee is as follows:

1. Fire Fighter Qualifications Committee

International Association of Fire Chiefs	3 persons
International Association of Fire Fighters	3 persons
International Association of Black Professional Fire Fighters	3 persons
International Fire Service Training Association	3 persons
International Society of Fire Service Instructors	3 persons
National Fire Protection Association	3 persons
Joint Council of National Fire Service Organizations	3 persons

2. Fire Inspector and Investigator Qualifications Committee

Fire Marshals Association of North America	2 persons
International Association of Arson Investigators	2 persons
International Association of Fire Chiefs	2 persons
International Association of Fire Fighters	2 persons
National Fire Protection Association	2 persons
Joint Council of National Fire Service Organizations	3 persons

3. Fire Service Instructor Qualifications Committee

International Association of Fire Chiefs	2 persons
International Association of Fire Fighters	2 persons
International Fire Service Training Association	2 persons
International Society of Fire Service Instructors	2 persons
National Fire Protection Association	2 persons
Joint Council of National Fire Service Organizations	3 persons

4. Fire Service Officer Qualifications Committee

Fire Marshals Association of North America	3 persons
International Association of Fire Chiefs	3 persons
International Association of Fire Fighters	3 persons
International Association of Black Professional Fire Fighters	3 persons
International Society of Fire Service Instructors	3 persons
Metropolitan Committee of International Association of Fire Chiefs	3 persons
National Fire Protection Association	3 persons
Joint Council of National Fire Service Organizations	3 persons

2. National Professional Qualifications Board for The Fire Service

A nine-person Board appointed by the Joint Council to act on behalf of the Council in the following duties and responsibilities:

- (i) The Board is constituted to supervise a nationally coordinated continuing professional development program for the Fire Service.
- (ii) The Board shall be responsive to the needs and opinions of all groups involved with the Fire Service and of others, including individuals who have related interests.
- (iii) It shall identify and define levels of professional progression.
- (iv) It shall correlate, review and validate draft standards prepared by the Technical Committees established to produce professional standards for each level of fire service responsibility.
- (v) It shall approve all draft standards before such are submitted for final adoption procedures.
- (vi) It shall be responsible for the accreditation and supervision of any national programs of certification and shall coordinate with implementing agencies to ensure validity and reliability of the evaluation criteria used in connection with such programs.

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STATEMENT BY THE BOARD AS TO THE APPLICABILITY OF STANDARDS DEVELOPED UNDER THE SYSTEM

Application to Existing Positions

It is not the intent of the Board that these standards shall have the effect of rendering invalid any rank, qualification and appointment acquired prior to the adoption of this standard.

Upon adoption of any standard, the authority having jurisdiction shall classify its existing ranks, qualifications, and appointments to determine equivalency with an appropriate level of the standard.

An incumbent of a position established prior to adoption of a standard shall be considered qualified and eligible for future progression in accordance with the standards.

Existing Systems

Those existing systems of qualifications which meet or exceed these minimum standards should continue in force.

It is the intent, however, that existing systems of qualifications which fail to meet these standards be discontinued after adoption of the standard, so that all persons acquiring qualification thereafter do so in accordance with this standard.

The Board recognizes that, at present, wide variations exist in the standards of competence required of members of the fire service; and that due to geographic considerations and the differing requirements of the many organizations providing fire protection, higher levels of competence than those provided in the standards produced under the National System may be desirable in certain areas.

The Board considers it essential that all members of the fire service eventually achieve the minimum standards.

Performance Objectives

The Board directed all committees to develop standards in terms of terminal performance objectives, which are considered the *minimum* necessary for a person to be considered competent to engage in providing fire service at the respective level and in the role specified by the standard, no matter where that person is serving.

In this connection, it is pointed out that the statement of performance objectives contained in the standards is not a training program outline. A number of instructional steps are required for mastery of an objective. Teaching outlines will be more detailed and extensive, as a single objective can require many hours of instruction and may interrelate to instruction for other objectives.

The Standards

The standards are designed so that any member of the fire service can achieve the level required by various means; these include participation in state and local training programs, self study, attendance at colleges offering suitable courses, and by combinations of these means.

The standards are the first step: there must also be a controlled testing procedure by which personnel can be officially certified when they have demonstrated their competency. The Board stresses that such testing procedures are essential to a meaningful program of professionalism and, accordingly, is prepared, in conformance with the directions of the Joint Council of National Fire Service Organizations, to review the validity and quality of testing procedures established by state and local authorities, and to accredit such procedures.

The Board strongly recommends that certification procedures be established on a statewide basis in every state where no such system exists at present, and that every fire department participate in the program.

The establishment of standards and testing procedures will not, in themselves, ensure that all personnel will achieve the required levels of competency. It follows that training programs should be developed to prepare members of the fire service to acquire the skills and knowledge necessary to achieve the terminal performance objectives of the standards.

Throughout the standards, levels of numerical ascending sequence have been used to denote the increasing degrees of responsibility: e.g., Fire Fighter I, II, III, the lowest or basic level being I. A similar sequence will be used in each standard; the total number of levels varying in accordance with the number of steps involved in the individual standard.

Approval of Standard

The final draft of NFPA Standard No. 1031, *Standard for Professional Qualifications for Fire Inspector, Fire Investigator and Fire Prevention Education Officer*, was approved by the National Professional Qualifications Board for the Fire Service on January 25, 1977, with the recommendation that it be submitted for adoption at the NFPA Annual Meeting to be held in Washington D.C. in May, 1977.

Fire Inspector, Fire Investigator
and Fire Prevention
Education Officer
Professional Qualifications

NFPA No. 1031

Standard for
Professional Qualifications for Fire Inspector, Fire
Investigator and Fire Prevention Education Officer

NFPA 1031-1977

This is the first edition of the Fire Inspector, Fire Investigator and Fire Prevention Education Officer Professional Qualifications Standard. It was approved by the National Fire Protection Association membership at the NFPA Annual Meeting in Washington, D.C., on May 19, 1977.

Origin and Development of No. 1031

On December 14, 1972, the National Professional Qualifications Board for the Fire Service directed the chairmen of four technical committees to develop minimum professional qualifications for each of the following areas: fire fighter, fire officer, fire inspector and investigator, and fire service instructor.

In compliance with this directive, the Fire Service Professional Qualifications Development Committee for Fire Inspector and Investigator met in many general and subcommittee sessions during 1973 through 1977. Much material was reviewed and many drafts developed. The committee in its deliberations developed a position that fire prevention education, which was normally conducted by fire inspection or fire marshal personnel, had sufficient need for special or additional qualifications so that a third category of professional competence was developed in addition to the two of fire inspector and fire investigator.

Many problems were encountered in the development of this standard because of its potential use by organizations or agencies which are not limited to classical "fire service" definitions, i.e., state fire marshal's offices, police agencies, etc. Their employees may require similar or additional professional qualifications than those set forth by this standard, and possibly may not require direct "fire service" background or experience. While this standard may be used by all organizations desiring to establish levels of professional competence for individuals employed or assigned as fire inspectors, fire investigators, or fire prevention education officers, it is specifically oriented for those individuals with a fire service background and who are uniformed members of public fire departments. This policy statement was promulgated and reaffirmed by the Professional Qualifications Board and the Joint Council of National Fire Service Organizations.

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This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred.

Table of Contents

Chapter 1 Administration	1031-5
1-1 Scope	1031-5
1-2 Purpose	1031-5
1-3 General.....	1031-6
Chapter 2 Definitions.....	1031-8
Chapter 3 Candidate	1031-11
3-1 General.....	1031-11
Chapter 4 Fire Inspector I	1031-12
4-1 General.....	1031-12
4-2 Flammable and Combustible Liquids	1031-12
4-3 Compressed and Liquefied Gases	1031-16
4-4 Explosives, Including Fireworks	1031-18
4-5 Other Hazardous Materials	1031-19
4-6 Fire Protection Equipment.....	1031-20
4-7 Heating and Cooking Equipment.....	1031-22
4-8 Principles of Electricity	1031-23
4-9 Safety to Life.....	1031-23
4-10 General Fire Safety.....	1031-26
4-11 Code Enforcement Procedures.....	1031-26
4-12 Fire Cause Determination	1031-27
4-13 Miscellaneous.....	1031-27
Chapter 5 Fire Inspector II.....	1031-28
5-1 General.....	1031-28
5-2 Flammable and Combustible Liquids.....	1031-28
5-3 Compressed and Liquefied Gases	1031-28
5-4 Explosives, Including Fireworks	1031-29
5-5 Other Hazardous Materials	1031-29
5-6 Fire Protection Equipment.....	1031-30
5-7 Heating and Cooking Equipment.....	1031-30
5-8 Safety to Life.....	1031-31
5-9 Code Enforcement.....	1031-33
5-10 Emergency Evacuation Plans	1031-33
5-11 Fire Cause Determination	1031-34
5-12 Miscellaneous.....	1031-34

Chapter 6 Fire Inspector III	1031-35
6-1 Administration.....	1031-35
6-2 Management Functions.....	1031-35
Chapter 7 Fire Investigator II	1031-37
7-1 Candidate Requirements.....	1031-37
7-2 General.....	1031-37
7-3 Legal.....	1031-38
7-4 Evidence Collection.....	1031-39
7-5 Photography.....	1031-39
7-6 Fire Scene Examination.....	1031-40
7-7 Records, Reports, and Documents.....	1031-40
7-8 Other Agencies.....	1031-41
7-9 Courtroom.....	1031-41
Chapter 8 Fire Investigator III	1031-42
8-1 Administration.....	1031-42
8-2 Management Functions.....	1031-42
Chapter 9 Fire Prevention Education Officer II	1031-43
9-1 General.....	1031-43
9-2 Public Information.....	1031-43
9-3 Public Education	1031-44
Chapter 10 Fire Prevention Education Officer III	1031-46
10-1 Administration.....	1031-46
10-2 Management Functions.....	1031-46
Appendix A	1031-48
Appendix B	1031-51

Standard for
Professional Qualifications for
Fire Inspector, Fire Investigator and Fire Prevention
Education Officer

NFPA 1031—1977

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates explanatory material on that paragraph in Appendix A.

Chapter 1 Administration

1-1* Scope. This Standard identifies the professional levels of competence required for fire department fire inspectors, fire investigators and fire prevention education officers. It specifically covers the requirements for knowledge and the progression through levels of competency.

1-2* Purpose. The purpose of this Standard is to specify in terms of performance objectives the minimum requirements of professional competence required for service as a fire inspector, fire investigator, or fire prevention education officer. It is not the intent of this Standard to restrict any jurisdiction from exceeding these minimum requirements. This Standard shall cover the requirements for three levels of progression for fire inspector (Fire Inspector I, II, and III), two levels of progression for fire investigator (Fire Investigator II and III), and two levels of progression for fire prevention education officer (Fire Prevention Education Officer II and III). It is not the intent of this Standard to require that a jurisdiction establish separate positions or employ separate people for each job classification (Fire Inspector, Fire Investigator, and Fire Prevention Education Officer) or level of progression.

1-3 General.

1-3.1* The standards for each level of professional competence shall be completed in accordance with recognized practices and procedures or as they may be defined by law or the authority having jurisdiction.

1-3.2 It is not required for the objectives to be mastered in the order in which they appear. The local or state training authority shall establish the instructional priorities and the training program content to prepare individuals to meet the performance objectives of this Standard.

1-3.3 Fire Inspector.

1-3.3.1 The candidate for Fire Inspector I shall meet all the requirements for Fire Fighter III, NFPA Standard No. 1001, *Fire Fighter Professional Qualifications*, 1974.

1-3.3.2 The candidate shall meet all the objectives for Fire Inspector I before being certified as a Fire Inspector I.

1-3.3.3 The Fire Inspector I shall meet all the objectives for Fire Inspector II before being certified as a Fire Inspector II.

1-3.3.4 The Fire Inspector II shall meet all the objectives for Fire Inspector III before being certified as a Fire Inspector III.

1-3.4 Fire Investigator.

1-3.4.1 The candidate for Fire Investigator II shall meet all the requirements for Fire Inspector I. (*See Chapter 4.*)

1-3.4.2 The candidate shall meet all the objectives for Fire Investigator II before being certified as a Fire Investigator II.

1-3.4.3 The Fire Investigator II shall meet all the objectives for Fire Investigator III before being certified as a Fire Investigator III.

1-3.5 Fire Prevention Education Officer.

1-3.5.1 The candidate for Fire Prevention Education Officer II shall meet all the requirements for Fire Inspector I. (*See Chapter 4.*)

1-3.5.2 The candidate shall meet all the objectives for Fire Prevention Education Officer II before being certified as a Fire Prevention Education Officer II.

1-3.5.3 The Fire Prevention Education Officer II shall meet all the objectives for Fire Prevention Education Officer III before being certified as a Fire Prevention Education Officer III.

1-3.6 The performance standards for each level of progression shall be met in their entirety before certification at that level.

1-3.7 Candidates and applicants for higher levels of progression shall be capable of physically performing all of the tasks that may be required of them.

1-3.8* The satisfactory completion of higher education courses including obtaining a degree in higher education is not required for certification under the objectives set forth in this Standard; however, higher education achieved in related fields should enhance the candidate's ability to grasp, understand and deal with the knowledge required for each level of progression.

Chapter 2 Definitions

In addition to the official NFPA definitions printed on the inside cover of this Standard, the following words are defined for use with the sections of this Standard. Definitions set forth in any document referenced by this Standard shall be the acceptable definition for use of the document only. Words not specifically defined in this Standard or other referenced documents shall be interpreted as being the ordinary usage of the word as set forth in *Webster's Third New International Dictionary of the English Language, Unabridged*, as published by the G. & C. Merriam Company of Springfield, Massachusetts in 1966.

Basic Knowledge. A fundamental acquaintance with facts, truths, or principles.

BLEVE. Boiling Liquid Expanding Vapor Explosion.¹

Candidate. The individual who has made application to become a Fire Inspector I, Fire Investigator II, or Fire Prevention Education Officer II.

Code Requirement(s). The statement in a law, ordinance or legally adopted reference which mandates or guides a particular action or procedure or restricts a particular action or procedure.

Demonstrate. To show by actual use, illustration, simulation or explanation.

Fire Department. The agency that provides fire suppression and other fire related services.

Fire Hazard. Any situation, process, material or condition which, on the basis of applicable data, may cause a fire or explosion or provide a ready fuel supply to augment the spread or intensity of the fire or explosion and which poses a threat to life or the property of others.

Fire Inspector I. The candidate who has demonstrated the knowledge and ability to perform the objectives specified in this Standard for the Fire Inspector I level.

¹See "Lessons from LP-Gas Utility Plant Explosion and Fire," *Fire Command!*, Volume 39, No. 4 (April, 1972), p. 18.

Fire Inspector II. The Fire Inspector I who has demonstrated the knowledge and ability to perform the objectives specified in this Standard for the Fire Inspector II level.

Fire Inspector III. A Fire Inspector II who is qualified to perform as the technical and/or administrative supervisor of a group of fire inspectors or placed in charge of a particular branch or section of a fire prevention bureau and has demonstrated the knowledge and ability to perform the objectives specified in this Standard for the Fire Inspector III level.

Fire Investigator II. The candidate who has demonstrated the knowledge and ability to perform the objectives specified in this Standard for the Fire Investigator II level.

Fire Investigator III. The Fire Investigator II who is qualified to perform as the technical or administrative (or both) supervisor of a group of fire investigators or placed in charge of a particular branch or section of a fire prevention bureau and has demonstrated the knowledge and ability to perform the objectives specified in this Standard for the Fire Investigator III level.

Fire Prevention Bureau. A section or agency of a fire department or other governmental jurisdiction which is responsible for fire prevention duties including, but not limited to, code enforcement, conduct of fire inspections, public relations, or public information work, fire investigation, the keeping of fire records and any other activity which may have as its ultimate purpose the prevention of fire and the reduction of life and property losses from fire. These sections or agencies may also be known as the Fire Prevention Division, Fire Marshal's Office, or other such terms.

Fire Prevention Division. (*See Fire Prevention Bureau.*)

Fire Prevention Education Officer II. The candidate who has demonstrated the knowledge and ability to perform the objectives specified in this Standard for the Fire Prevention Education Officer II level.

Fire Prevention Education Officer III. A Fire Prevention Education Officer II who is qualified to perform as the technical or administrative (or both) supervisor of a group of fire prevention education personnel or is placed in charge of a particular branch or section of a fire prevention bureau and has demonstrated the knowledge and

ability to perform the objectives specified in this Standard for the Fire Prevention Education Officer III level.

Identify. To physically select, indicate or explain verbally or in writing, using acceptable and recognizable terms.

Local Fire Alarm. Any fire alarm device or system other than a municipal fire alarm system.

Objective. A goal that is achieved through the attainment of a skill, knowledge, or both, which can be observed or measured.

Qualified. Having satisfactorily completed the requirements of the objectives.

Regulation. The statute, law, ordinance or authorized rules by which something or someone is governed.

Working Knowledge. The ability to translate an understanding of facts, truths or principles into a desired action or application.

Chapter 3 Candidate

3-1 General.

3-1.1 Candidates shall possess a valid driver's license for the state in which they are employed and shall identify state and local laws governing the operation of emergency vehicles.

3-1.2 Candidates shall demonstrate an ability to clearly express themselves orally.

3-1.3 Candidates shall demonstrate an ability to clearly express themselves in writing.

3-1.4 Candidates shall demonstrate a knowledge of occupationally related personal safety practices and procedures.

3-1.5 Candidates shall demonstrate through tests, or interview, or both, their ability to interact with the public, under conditions of code enforcement, fire investigation, or fire prevention education duties, with tact, discretion, and without loss of authority.

Chapter 4 Fire Inspector I

(See Section 1-3.3.1.)

4-1 General.

4-1.1 The Fire Inspector I shall demonstrate a knowledge of the legally established responsibilities and empowerment related to the performance of his duties.

4-1.2 The Fire Inspector I shall demonstrate a knowledge of the established procedure for modification of requirements.

4-1.3 The Fire Inspector I shall demonstrate a knowledge of the established appeals procedure and judicial review process for the jurisdiction in which he is employed.

4-1.4 The Fire Inspector I shall demonstrate a knowledge of other agencies which may be referred to for assistance in correcting or correction of hazards.

4-1.5 The Fire Inspector I shall demonstrate an ability to initiate corrective procedures for fire hazards discovered during fire inspections.

4-2 Flammable and Combustible Liquids.

4-2.1 Properties of Flammable and Combustible Liquids.

4-2.1.1 The Fire Inspector I shall identify and explain the general properties of flammable and combustible liquids.

4-2.1.2 The Fire Inspector I shall demonstrate a working knowledge of the definition of flash point.

4-2.1.3 The Fire Inspector I shall demonstrate a working knowledge of the definition of ignition temperature.

4-2.1.4 The Fire Inspector I shall demonstrate a working knowledge of the basic effects of temperature and pressure on flammable and combustible liquids.

4-2.1.5 The Fire Inspector I shall demonstrate a working knowledge of the definition of flammable and explosive limits.

4-2.1.6 The Fire Inspector I shall demonstrate a working knowledge of the definition of specific gravity.

4-2.1.7 The Fire Inspector I shall demonstrate a working knowledge of the definition of boiling point.

4-2.1.8 The Fire Inspector I shall demonstrate a working knowledge of the basic classes of flammable and combustible liquids as defined by *Flammable and Combustible Liquids Code*, NFPA No. 30.

4-2.1.9 The Fire Inspector I shall demonstrate a working knowledge of the definition of toxicity.

4-2.1.10 The Fire Inspector I shall demonstrate a working knowledge of the definition of reactivity.

4-2.2 Storage, Handling and Use of Flammable and Combustible Liquids.

4-2.2.1 The Fire Inspector I shall identify the fire hazards associated with the storage, handling and use of flammable and combustible liquids.

4-2.2.2 The Fire Inspector I shall demonstrate a knowledge of the regulations and hazards attendant to the transfer of flammable and combustible liquids.

4-2.2.3 The Fire Inspector I shall demonstrate a knowledge of the regulations and fire hazards attendant to finishing processes that involve flammable and combustible liquids.

4-2.2.4 The Fire Inspector I shall demonstrate a knowledge of what may constitute possible sources of ignition during storage, handling and use of flammable and combustible liquids.

4-2.2.5 The Fire Inspector I shall demonstrate a knowledge of conditions which might be conducive to creating explosive atmospheres in the storage, handling and use of flammable and combustible liquids.

4-2.2.6 The Fire Inspector I shall demonstrate a knowledge of conditions associated with the typical storage, handling and use of flammable and combustible liquids which might be conducive or lead to a BLEVE situation.

4-2.2.7 The Fire Inspector I shall demonstrate a working knowledge of regulations or code provisions related to the storage, handling or use of flammable or combustible liquids.

4-2.3 Underground Storage Tanks for Flammable and Combustible Liquids.

4-2.3.1 The Fire Inspector I shall demonstrate a knowledge of regulations and acceptable installation practices relative to underground storage tanks for flammable and combustible liquids.

4-2.3.2 The Fire Inspector I shall demonstrate a knowledge of normal venting procedures and devices installed on underground storage tanks for flammable and combustible liquids.

4-2.3.3 The Fire Inspector I shall demonstrate a knowledge of the normal requirements and acceptable installation practices relative to piping and valves attendant to underground storage tanks for flammable and combustible liquids.

4-2.4 Aboveground Storage Tanks for Flammable and Combustible Liquids.

4-2.4.1 The Fire Inspector I shall demonstrate a knowledge of the regulations and acceptable installation practices of aboveground storage tanks for flammable and combustible liquids.

4-2.4.2 The Fire Inspector I shall demonstrate an ability to determine if normal and emergency venting devices are being properly maintained.

4-2.4.3 The Fire Inspector I shall demonstrate a knowledge of drainage or diking systems, or both, that may be required for aboveground storage of flammable and combustible liquids.

4-2.4.4 The Fire Inspector I shall demonstrate a knowledge of the requirements for an installation of piping and valves attendant to aboveground storage tanks for flammable and combustible liquids.

4-2.5 Inside Storage Tanks for Flammable and Combustible Liquids.

4-2.5.1 The Fire Inspector I shall demonstrate a knowledge of the regulations and acceptable installation practices relative to inside storage of flammable and combustible liquids.

4-2.5.2 The Fire Inspector I shall demonstrate an ability to determine if normal and emergency venting devices are being properly maintained.

4-2.5.3 The Fire Inspector I shall demonstrate a knowledge of drainage or containment systems which may be required for the inside storage of flammable and combustible liquids.

4-2.5.4 The Fire Inspector I shall demonstrate a knowledge of requirements and acceptable installation practices relative to piping and valves attendant to the inside storage of flammable and combustible liquids.

4-2.6 Outside Container Storage for Flammable and Combustible Liquids.

4-2.6.1 The Fire Inspector I shall demonstrate a knowledge of the regulations or code requirements relative to the outside storage of flammable and combustible liquids.

4-2.6.2 The Fire Inspector I shall demonstrate a knowledge of acceptable flammable and combustible liquid containers for outside storage.

4-2.6.3 The Fire Inspector I shall demonstrate a knowledge of acceptable locations and storage parameters such as aisle spacing, stacking, storing of containers in vertical or horizontal positions, etc., relative to the outside storage of flammable and combustible liquids.

4-2.6.4 The Fire Inspector I shall demonstrate a basic knowledge of container venting devices and venting practices.

4-2.7 Inside Container Storage for Flammable and Combustible Liquids.

4-2.7.1 The Fire Inspector I shall demonstrate a knowledge of the regulations, including quantity limitations, that may exist for different occupancies relative to the inside storage of flammable and combustible liquids.

4-2.7.2 The Fire Inspector I shall demonstrate a basic knowledge of acceptable flammable and combustible liquid containers for inside storage.

4-2.7.3 The Fire Inspector I shall demonstrate a basic knowledge of the storage parameters such as aisle spacing, stacking, storage of containers in vertical or horizontal positions, etc., relative to the inside storage of flammable and combustible liquids.

4-2.7.4 The Fire Inspector I shall demonstrate a knowledge of normal and emergency venting devices or procedures acceptable for the inside storage of flammable and combustible liquids.

4-2.8 Flammable and Combustible Liquids Fire Extinguishment.

4-2.8.1 The Fire Inspector I shall have a knowledge of the basic techniques of flammable and combustible liquids fire extinguishment.

4-2.8.2 The Fire Inspector I shall demonstrate a knowledge of portable fire extinguisher operations and installation requirements for areas involving flammable and combustible liquids.

4-2.8.3 The Fire Inspector I shall demonstrate a basic knowledge of fixed fire extinguishing systems required or installed for flammable and combustible liquids storage, handling or use.

4-2.9 Flammable and Combustible Liquids Labeling.

4-2.9.1 The Fire Inspector I shall demonstrate a basic understanding of the regulatory labeling and placarding systems used for flammable and combustible liquids identification.

4-2.10 Transportation of Flammable and Combustible Liquids.

4-2.10.1 The Fire Inspector I shall demonstrate a basic understanding of regulations relative to the transportation of flammable and combustible liquids within the jurisdiction in which the inspector is employed.

4-2.10.2 The Fire Inspector I shall have a knowledge of which agencies regulate the transportation of flammable and combustible liquids within the jurisdiction in which the inspector is employed.

4-2.10.3 The Fire Inspector I shall have a knowledge of which agencies offer assistance in handling flammable and combustible liquids emergencies in the jurisdiction in which the inspector is employed.

4-3 Compressed and Liquefied Gases.

4-3.1 Properties of Compressed and Liquefied Gases.

4-3.1.1 The Fire Inspector I shall identify the general properties of compressed and liquefied gases.

4-3.1.2 The Fire Inspector I shall demonstrate a working knowledge of the effects of temperature and pressure as they relate to compressed and liquefied gases.

4-3.1.3 The Fire Inspector I shall demonstrate a working knowledge of the definition of specific gravity, particularly as it relates to compressed and liquefied gases.

4-3.1.4 The Fire Inspector I shall demonstrate a knowledge of the differences between compressed and liquefied gases.

4-3.1.5 The Fire Inspector I shall demonstrate an understanding of the definition of toxicity.

4-3.1.6 The Fire Inspector I shall demonstrate an understanding of the definition of reactivity.

4-3.2 Storage, Handling and Use of Compressed and Liquefied Gases.

4-3.2.1 The Fire Inspector I shall identify the fire hazards associated with the typical storage, handling, and use of compressed and liquefied gases.

4-3.2.2 The Fire Inspector I shall demonstrate a knowledge of possible ignition sources and fire causes involving compressed and liquefied gases.

4-3.2.3 The Fire Inspector I shall demonstrate an understanding of the conditions which might be conducive to fire initiation and propagation involving compressed and liquefied gases.

4-3.3 Compressed and Liquefied Gases Containers.

4-3.3.1 The Fire Inspector I shall demonstrate the acceptable practices relative to compressed and liquefied gases container installation and storage.

4-3.4 Compressed and Liquefied Gases Transfer Operations.

4-3.4.1 The Fire Inspector I shall demonstrate a basic knowledge of the practices and procedures involved in the transfer of compressed and liquefied gases.

4-3.5 Compressed and Liquefied Gas Leaks.

4-3.5.1 The Fire Inspector I shall demonstrate a basic knowledge of the means of compressed and liquefied gases leakage control.

4-3.6 Transportation of Compressed and Liquefied Gases.

4-3.6.1 The Fire Inspector I shall demonstrate a basic knowledge of the regulations relative to the transportation of compressed and liquefied gases.

4-3.6.2 The Fire Inspector I shall have a knowledge of the agencies which regulate the transportation of compressed and liquefied gases within the jurisdiction in which the inspector is employed.

4-3.6.3 The Fire Inspector I shall have a knowledge of the agencies which offer assistance in handling compressed and liquefied gases emergencies within the jurisdiction in which the inspector is employed.

4-3.7 Fire Extinguishment of Compressed and Liquefied Gases.

4-3.7.1 The Fire Inspector I shall have a knowledge of the basic fire extinguishment practices and procedures for compressed and liquefied gases emergencies.

4-3.7.2 The Fire Inspector I shall demonstrate a knowledge of portable fire extinguisher operations and installation requirements for areas involving compressed and liquefied gases.

4-3.7.3 The Fire Inspector I shall demonstrate a basic knowledge of fixed fire extinguishing systems required or installed for the storage, handling, or use of compressed and liquefied gases.

4-3.8 Labeling of Compressed and Liquefied Gases.

4-3.8.1 The Fire Inspector I shall demonstrate a basic knowledge of the regulatory labeling and placarding regulations relative to compressed and liquefied gases.

4-4 Explosives, Including Fireworks.

4-4.1 Properties of Explosives.

4-4.1.1 The Fire Inspector I shall identify the classifications of explosives. (*See NFPA No. 495, Code for the Manufacture, Transportation, Storage and Use of Explosive Materials.*)

4-4.2 The Fire Inspector I shall understand the need for security of explosives.

4-4.3 The Fire Inspector I shall understand the regulations relative to the transportation of explosives, including fireworks, within the jurisdiction in which the inspector is employed.

4-4.4 The Fire Inspector I shall identify the common hazards associated with the typical storage, handling and use of explosives, including fireworks.

4-4.5 Labeling of Explosives, Including Fireworks.

4-4.5.1 The Fire Inspector I shall demonstrate a knowledge of regulatory labeling and placarding systems relative to explosives, including fireworks.

4-4.6 The Fire Inspector I shall have a knowledge of the sources from which detailed or technical information on explosives, including fireworks, might be obtained.

4-4.7 Storage of Explosives, Including Fireworks.

4-4.7.1 The Fire Inspector I shall have a knowledge of the code requirements and regulations for the storage of explosives, including fireworks.

4-4.7.2 The Fire Inspector I shall have a basic knowledge of the type and construction of storage facilities required for the various classes of explosives.

4-5 Other Hazardous Materials.

4-5.1 General.

4-5.1.1 The Fire Inspector I shall demonstrate a basic knowledge of the regulatory labeling and placarding systems for various types and quantities of hazardous materials.

4-5.1.2 The Fire Inspector I shall demonstrate a working knowledge of the code requirements and regulations for the typical storage, handling and use of various types and quantities of hazardous materials.

4-5.1.3 The Fire Inspector I shall possess a knowledge of sources of detailed and technical information about various hazardous materials.

4-5.2 Specific Hazardous Materials.

4-5.2.1* The Fire Inspector I shall have a basic knowledge of the characteristics of corrosives and shall be able to name the more common corrosives.

4-5.2.2* The Fire Inspector I shall have a basic knowledge of reactive material characteristics and shall be able to name the more common reactive materials.

4-5.2.3* The Fire Inspector I shall have a basic knowledge of unstable material characteristics and shall be able to name the more common unstable materials.

4-5.2.4* The Fire Inspector I shall demonstrate a basic knowledge of toxic materials characteristics and shall be able to name the more common toxic materials.

4-5.2.5* The Fire Inspector I shall have a basic knowledge of radioactive material characteristics and shall be able to name the more common radioactive materials.

4-5.2.6* The Fire Inspector I shall demonstrate a basic knowledge of oxidizing material characteristics and shall be able to name the more common oxidizing materials.

4-5.2.7 The Fire Inspector I shall demonstrate a basic knowledge of the general fire hazard properties of the various types of plastics.

4-5.2.8 The Fire Inspector I shall demonstrate a knowledge of the code requirements and regulations for the typical storage, handling and use of natural and synthetic fibers.

4-5.2.9 Combustible Metals.

4-5.2.9.1* The Fire Inspector I shall demonstrate an understanding of combustible metal characteristics and shall be able to name the more common combustible metals.

4-5.2.9.2 The Fire Inspector I shall demonstrate a knowledge of the code requirements and regulations relative to the typical storage, handling and use of combustible metals.

4-5.2.10 Combustible Dusts.

4-5.2.10.1* The Fire Inspector I shall demonstrate a basic knowledge of combustible dust characteristics and shall be able to name more common combustible dusts.

4-5.2.10.2 The Fire Inspector I shall understand the basic fire and explosion characteristics of the various combustible dusts.

4-5.2.10.3 The Fire Inspector I shall demonstrate a basic knowledge of the code requirements and regulations relative to the typical storage and handling of combustible dusts.

4-6 Fire Protection Equipment.

4-6.1 Portable Fire Extinguishers.

4-6.1.1 The Fire Inspector I shall have a basic knowledge of the types of portable fire extinguishers. (*See NFPA No. 10, Standard on Portable Fire Extinguishers.*)

4-6.1.2 The Fire Inspector I shall demonstrate a working knowledge of portable fire extinguishers.

4-6.1.3 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of portable fire extinguishers.

4-6.1.4 The Fire Inspector I shall demonstrate a knowledge of the capability of extinguishing agents and the proper method for agent application.

4-6.1.5 The Fire Inspector I shall demonstrate a knowledge of code requirements and regulations relative to the distribution and location of portable fire extinguishers.

4-6.1.6 The Fire Inspector I shall demonstrate a knowledge of portable fire extinguishers maintenance requirements and procedures.

4-6.2 Fixed Fire Extinguishing Systems.

4-6.2.1* The Fire Inspector I shall demonstrate a basic understanding of fixed fire extinguishing systems.

4-6.2.2 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of fixed fire extinguishing systems.

4-6.2.3 The Fire Inspector I shall demonstrate a working knowledge of fixed fire extinguishing systems.

4-6.2.4 The Fire Inspector I shall demonstrate a knowledge of the capabilities of the extinguishing agent and the proper procedures for agent application in a fixed fire extinguishing system.

4-6.3 Sprinkler Systems.

4-6.3.1 The Fire Inspector I shall demonstrate a basic knowledge of the different types of sprinkler systems. (*See NFPA No. 13, Standard on Sprinkler Systems.*)

4-6.3.2 The Fire Inspector I shall demonstrate a working knowledge of sprinkler systems and their appurtenances.

4-6.3.3 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of sprinkler systems.

4-6.3.4 The Fire Inspector I shall demonstrate a knowledge of the capabilities or limitations of sprinkler systems.

4-6.4 Standpipe and Hose Systems.

4-6.4.1 The Fire Inspector I shall demonstrate a basic knowledge of the types of standpipe and hose systems. (*See NFPA No. 14, Standard on Standpipe and Hose Systems.*)

4-6.4.2 The Fire Inspector I shall demonstrate a working knowledge of standpipe and hose systems and their appurtenances.

4-6.4.3 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of a standpipe and hose system.

4-6.4.4 The Fire Inspector I shall demonstrate a knowledge of standpipe and hose system equipment use and capabilities.

4-6.5 Private Water Supply Systems.

4-6.5.1 The Fire Inspector I shall demonstrate a basic knowledge of private water supply systems.

4-6.5.2 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of a private water supply system.

4-6.6 Heat, Smoke and Flame Detection Systems.

4-6.6.1 The Fire Inspector I shall demonstrate a basic knowledge of heat, smoke and flame detection systems and devices.

4-6.6.2 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of heat, smoke and flame detection systems or device.

4-6.6.3 The Fire Inspector I shall demonstrate a basic knowledge of the proper installation locations of heat, smoke and flame detection devices.

4-6.7 Fire Alarm Systems and Devices.

4-6.7.1 The Fire Inspector I shall demonstrate a basic knowledge of local fire alarm systems and devices.

4-6.7.2 The Fire Inspector I shall demonstrate an ability to evaluate the operational readiness of local fire alarm systems and devices.

4-6.7.3 The Fire Inspector I shall demonstrate a knowledge of the warning capability of local fire alarm systems and devices.

4-6.7.4 The Fire Inspector I shall demonstrate a basic knowledge of municipal fire alarm systems.

4-6.7.5 The Fire Inspector I shall demonstrate a basic knowledge of the interconnection between local and municipal fire alarm systems.

4-6.7.6 The Fire Inspector I shall differentiate between types of home, local, proprietary, central station, and municipal fire alarm systems.

4-6.7.7 The Fire Inspector I shall demonstrate a basic knowledge of the proper installation locations of fire alarm system components or devices.

4-7 Heating and Cooking Equipment.

4-7.1 The Fire Inspector I shall demonstrate a basic knowledge of the fire hazards related to the various types of heating and cooking equipment.

4-7.2 The Fire Inspector I shall demonstrate a knowledge of the general fire safety safeguards incorporated in the various types of heating and cooking equipment systems.

4-7.3 The Fire Inspector I shall demonstrate a basic knowledge of the fire hazards and code requirements related to installation and fuel storage of heating and cooking equipment.

4-7.4 The Fire Inspector I shall demonstrate a knowledge of sources of detailed and technical information about heating and cooking equipment.

4-8 Principles of Electricity.

4-8.1 The Fire Inspector I shall have a basic knowledge of applied elementary electrical theory.

4-8.2 The Fire Inspector I shall have a basic knowledge of the construction of and safety devices used in electrical systems.

4-8.3 The Fire Inspector I shall have a basic knowledge of the fire and life hazards associated with the typical uses of electricity and electrical systems.

4-8.4 The Fire Inspector I shall have a knowledge of sources of detailed and technical information related to electricity and electrical systems.

4-9 Safety to Life.

4-9.1 General.

4-9.1.1 The Fire Inspector I shall have a basic knowledge of the code requirements, regulations, basic operational features, and fire hazards presented by various occupancies and, particularly, public assembly, residential, business, mercantile, office, storage, industrial, manufacturing and utility occupancies.

4-9.1.2 Means of Egress.

4-9.1.2.1 The Fire Inspector I shall have a knowledge of the means of egress requirements for various occupancies.

4-9.1.2.2 The Fire Inspector I shall demonstrate an ability to determine if existing egress facilities for the building, floor or room are adequate for the occupancy involved.

4-9.1.2.3 The Fire Inspector I shall demonstrate ability to determine whether travel distances to exits are within allowable limits.

4-9.1.2.4 The Fire Inspector I shall demonstrate an ability to determine if there is adequate access to egress facilities.

4-9.1.2.5 The Fire Inspector I shall demonstrate an ability to determine if exits are properly illuminated, marked, placed, secured, openable and equipped with hardware.

4-9.1.2.6 The Fire Inspector I shall demonstrate an ability to distinguish between enclosed stairwells and smoke towers and to determine if general construction and access is properly maintained.

4-9.1.2.7 The Fire Inspector I shall demonstrate an ability to determine if egress paths are adequate in width and properly illuminated and maintained.

4-9.1.2.8 The Fire Inspector I shall have a knowledge of the code requirements and regulations relative to the maintenance of means of egress from various occupancies.

4-9.1.3 Interior Finishes.

4-9.1.3.1 The Fire Inspector I shall demonstrate an ability to determine the proper interior finish for various areas of an occupancy, particularly that for egress paths.

4-9.1.3.2 The Fire Inspector I shall demonstrate an ability to conduct a field test of interior finish materials.

4-9.1.3.3 The Fire Inspector I shall demonstrate a knowledge of acceptable flame spread and smoke ratings for the various areas of an occupancy.

4-9.1.3.4 The Fire Inspector I shall demonstrate a knowledge of acceptable test methods and markings or labeling for interior finishes.

4-9.1.3.5 The Fire Inspector I shall demonstrate a knowledge of the purpose and acceptability of fire retardant paints and impregnation treatments.

4-9.1.4 Building Construction.

4-9.1.4.1 The Fire Inspector I shall have a basic knowledge of the features of fire protection and life safety related to building construction that are germane to various types of occupancies.

4-9.1.4.2 The Fire Inspector I shall demonstrate a knowledge of the purpose of rated building construction.

4-9.1.4.3 The Fire Inspector I shall demonstrate a knowledge of acceptable test methods and marking or labeling for building construction assemblies or devices.

4-9.1.4.4 The Fire Inspector I shall demonstrate a working knowledge of the types of fire doors and installation requirements.

4-9.1.4.5 The Fire Inspector I shall demonstrate a basic knowledge of where rated building construction is required.

4-9.1.4.6 The Fire Inspector I shall demonstrate a knowledge of building construction components installed for fire related purposes including but not limited to fire stops, draft curtains, fire walls, smoke vents, chimneys, flues, and rated ceilings.

4-9.1.4.7 The Fire Inspector I shall demonstrate a knowledge of the classes of roof covering.

4-9.1.4.8 The Fire Inspector I shall demonstrate a knowledge of the requirements for and construction of special building construction features including but not limited to projection booths, stages, proscenium openings, and flammable liquid storage rooms.

4-9.1.4.9 The Fire Inspector I shall demonstrate a knowledge of building construction classification.

4-9.1.5 Building Equipment.

4-9.1.5.1 The Fire Inspector I shall have a basic knowledge of the types of and installation requirements for building service equipment that are germane to various occupancies and which can, through their operation, affect fire protection and life safety.

4-9.1.5.2 The Fire Inspector I shall demonstrate a knowledge of the proper installation, maintenance and use of heating, ventilating and air conditioning systems from a fire safety standpoint including, but not limited to, attendant devices such as dampers, detection devices, thermostats, and operational controls.

4-9.1.5.3 The Fire Inspector I shall demonstrate a knowledge of the proper installation, maintenance and use of kitchen cooking equipment, including hoods and ducts.

4-9.1.6 The Fire Inspector I shall have a basic knowledge of which other jurisdictional authorities may have requirements, or conduct inspections, involving life safety or fire protection.

4-9.2 Decorations, Decorative Materials and Furnishings.

4-9.2.1 The Fire Inspector I shall have a knowledge of the basic fire safety requirements for decorations, decorative materials and furnishings.

4-9.2.2 The Fire Inspector I shall demonstrate an ability to field test decorations, decorative materials and furnishings for acceptability and use in various occupancies.

4-9.3 Fire Drills.

4-9.3.1 The Fire Inspector I shall demonstrate a knowledge of the requirements relative to fire drills which may be required within the jurisdiction in which he is employed.

4-9.3.2 The Fire Inspector I shall demonstrate an ability to conduct or evaluate, or both, fire drills in various occupancies.

4-10 General Fire Safety.

4-10.1 The Fire Inspector I shall have a working knowledge of general fire safety code requirements and regulations including but not limited to trash and debris, smoking, open burning, maintaining fire department access, housekeeping procedures, reporting of fire incidents, and limiting combustible decorations and furnishings.

4-10.2 The Fire Inspector I shall have a basic knowledge of the requirements, and purpose of emergency evacuation plans.

4-11 Code Enforcement Procedures.

4-11.1 General.

4-11.1.1 The Fire Inspector I shall demonstrate a knowledge of acceptable code enforcement procedures.

4-11.1.2 The Fire Inspector I shall demonstrate a knowledge of jurisdictional responsibilities of federal, state and local governments and organizations relative to code enforcement procedures.

4-11.1.3 The Fire Inspector I shall demonstrate a basic knowledge of anticipated human behavior relative to code enforcement.

4-11.1.4 The Fire Inspector I shall demonstrate a knowledge of local code enforcement procedures.

4-11.1.5 The Fire Inspector I shall demonstrate a basic knowledge of the judicial system, particularly as it relates to code enforcement procedures.

4-11.1.6 The Fire Inspector I shall demonstrate a basic knowledge of the legal processes as they relate to code enforcement procedures.

4-11.1.7 The Fire Inspector I shall demonstrate a knowledge of recommended courtroom demeanor as it relates to code enforcement procedures.

4-11.1.8 The Fire Inspector I shall demonstrate a basic knowledge of the moral and legal responsibilities associated with code enforcement procedures.

4-11.1.9 The Fire Inspector I shall be knowledgeable as to when licenses, or permits, or both, are required for the sale, use, storage or possession of hazardous materials.

4-11.1.10 The Fire Inspector I shall be knowledgeable of which processes, procedures or business operations involving fire protection equipment require licenses, or permits, or both.

4-11.1 The Fire Inspector I shall demonstrate a knowledge of sources of information on code enforcement procedures.

4-11.2 Report Preparation.

4-11.2.1 The Fire Inspector I shall demonstrate a basic knowledge of report preparation.

4-11.2.2 The Fire Inspector I shall demonstrate a knowledge of accepted filing techniques.

4-11.3 Code Enforcement Equipment.

4-11.3.1 The Fire Inspector I shall demonstrate a basic knowledge of the essential equipment necessary to accomplish code enforcement including, but not limited to, elementary photography equipment and portable flammable and combustible atmosphere detection equipment.

4-11.4 Plans and Specifications.

4-11.4.1 The Fire Inspector I shall be familiar with the procedures required for the processing of plans and specifications.

4-12 Fire Cause Determination.

4-12.1 The Fire Inspector I shall have a basic knowledge of the requirements, need and purpose for fire cause determination and fire investigation.

4-13 Miscellaneous.

4-13.1 The Fire Inspector I shall demonstrate a knowledge of what is required in performing standby fire safety duties in public assembly occupancies.

14-13.2 The Fire Inspector I shall demonstrate a knowledge of the general procedures for handling complaints.

14.13.3 The Fire Inspector I shall demonstrate a knowledge of the procedures for investigating flammable gas or flammable or combustible liquid leaks or suspected leaks.

14-13.4 The Fire Inspector I shall demonstrate a basic knowledge of building code contents and requirements.

Chapter 5 Fire Inspector II

(See Section 1-3.3.3.)

5-1 General.

5-1.1 The Fire Inspector II shall demonstrate his knowledge, understanding, and performance of the requirements specified for Fire Inspector I.

5-2 Flammable and Combustible Liquids.

5-2.1 The Fire Inspector II shall demonstrate a basic knowledge of the effect of pressure on the design, size and contents of storage tanks and containers for flammable and combustible liquids.

5-2.2 The Fire Inspector II shall demonstrate a knowledge of the storage, handling and use conditions of flammable and combustible liquids which are most conducive to the initiation, propagation and spread of fire.

5-2.3 The Fire Inspector II shall demonstrate a knowledge of the installation and operational requirements of fixed fire extinguishing systems installed concomitant to flammable and combustible liquids storage, handling or use.

5-2.4 The Fire Inspector II shall demonstrate a knowledge of how to abate the fire hazards associated with flammable or combustible liquid spills or leaks.

5-3 Compressed and Liquefied Gases.

5-3.1 The Fire Inspector II shall demonstrate a basic knowledge of the physical and chemical characteristics of compressed and liquefied gases and cryogenics.

5-3.2 The Fire Inspector II shall demonstrate a knowledge of the storage, handling and use conditions of compressed and liquefied gases which are most conducive to the initiation, propagation and spread of fire.

5-3.3 The Fire Inspector II shall demonstrate a knowledge of which organizations have codes or specifications relative to compressed and liquefied gases containers, cylinders, or tanks.

5-3.4 The Fire Inspector II shall demonstrate a knowledge of the requirements for marking, testing, repair, and maintenance of compressed and liquefied gases containers, cylinders or tanks.

5-3.5 The Fire Inspector II shall demonstrate a knowledge of the code requirements and regulations relative to quantity limitations, distances, physical damage and protection for aboveground containers for compressed and liquefied gases.

5-3.6 The Fire Inspector II shall demonstrate a knowledge of the special handling procedures for gas transfer operations involving compressed and liquefied gases.

5-3.7 The Fire Inspector II shall demonstrate a basic knowledge of the operation and use of excess flow check valves in compressed and liquefied gases piping and storage.

5-3.8 The Fire Inspector II shall demonstrate a knowledge of how to abate the fire hazards associated with compressed and liquefied gases spills or leaks.

5-3.9 The Fire Inspector II shall demonstrate a knowledge of the installation and operational requirements of fixed fire extinguishing systems installed concomitant to the storage, handling and use of compressed and liquefied gases.

5-4 Explosives, Including Fireworks.

5-4.1 The Fire Inspector II shall demonstrate a knowledge of the requirements for security measures for explosives, including fireworks.

5-4.2 The Fire Inspector II shall demonstrate a knowledge of which federal or state regulatory agencies govern the transportation of explosives, including fireworks.

5-4.3 The Fire Inspector II shall demonstrate a knowledge of the effects of temperature and moisture on explosives, including fireworks.

5-4.4 The Fire Inspector II shall demonstrate a knowledge of sensitivity or stability characteristics of the various types of explosives, including fireworks.

5-4.5 The Fire Inspector II shall demonstrate a knowledge of explosives storage facility construction and operation.

5-5 Other Hazardous Materials.

5-5.1 Natural and Synthetic Fibers.

5-5.1.1 The Fire Inspector II shall demonstrate a knowledge of sources of technical and detailed information about natural and synthetic fibers.

5-5.1.2 The Fire Inspector II shall demonstrate a knowledge of the fire hazards associated with the storage, handling and use of natural and synthetic fibers.

5-5.2 Combustible Dusts.

5-5.2.1 The Fire Inspector II shall demonstrate a knowledge of code requirements and regulations governing combustible dusts.

5-5.2.2 The Fire Inspector II shall demonstrate a knowledge of code requirements, regulations and basic installation practices relative to explosion suppression systems for combustible dusts.

5-6 Fire Protection Equipment.

5-6.1 The Fire Inspector II shall demonstrate an ability to evaluate the proper installation and testing of all types of fire protection equipment including, but not limited to, fire doors, fire walls, fixed fire extinguishing systems, water supply systems, fire detection systems, and fire alarm systems.

5-6.2 The Fire Inspector II shall demonstrate an ability to evaluate the testing of portable fire extinguishers.

5-6.3 The Fire Inspector II shall demonstrate an ability to evaluate the application, capabilities, testing and maintenance of fixed fire extinguishing systems.

5-6.4 Water Supply Systems.

5-6.4.1 The Fire Inspector II shall demonstrate a knowledge of water system pressure and piping requirements.

5-6.4.2 The Fire Inspector II shall demonstrate a knowledge of hydrant construction, location, and spacing.

5-6.4.3 The Fire Inspector II shall demonstrate a knowledge of the factors that affect fire flow demands.

5-7 Heating and Cooking Equipment.

5-7.1 The Fire Inspector II shall demonstrate a working knowledge of the fire hazards related to the various types of heating and cooking equipment and systems.

5-7.2 The Fire Inspector II shall demonstrate a working knowledge of the fire safety safeguards normally installed concomitant to heating and cooking equipment.

5-7.3 The Fire Inspector II shall demonstrate a working knowledge of the fire hazards and code requirements related to heating and cooking equipment installation and fuel storage.

5-7.4 Industrial Ovens and Furnaces.

5-7.4.1 The Fire Inspector II shall demonstrate a working knowledge of the fire hazards inherent to industrial ovens and furnace systems.

5-7.4.2 The Fire Inspector II shall demonstrate a working knowledge of the fire safety safeguards normally installed concomitant to industrial ovens and furnaces.

5-8 Safety to Life.

5-8.1 The Fire Inspector II shall demonstrate a knowledge of the code requirements and purposes for rated interior finishes.

5-8.2 Means of Egress.

5-8.2.1 The Fire Inspector II shall demonstrate a knowledge of how to calculate egress requirements.

5-8.2.2 The Fire Inspector II shall demonstrate an ability to determine the required location of exits.

5-8.2.3 The Fire Inspector II shall demonstrate a working knowledge of acceptable means of egress devices including, but not limited to, doors, hardware, and lights.

5-8.3 Interior Finishes.

5-8.3.1 The Fire Inspector II shall demonstrate a working knowledge for specifying interior finish requirements in various areas of a building according to its designated occupancy.

5-8.3.2 The Fire Inspector II shall demonstrate an ability to evaluate tests and test reports of interior finish materials.

5-8.4 Building Construction.

5-8.4.1 The Fire Inspector II shall demonstrate a working knowledge of when to specify enclosed stairs, smoke towers or other methods of egress.

5-8.4.2 The Fire Inspector II shall demonstrate an ability to evaluate tests and test reports of building construction assemblies or devices.

5-8.4.3 The Fire Inspector II shall demonstrate a working knowledge of where and what types of fire doors are required for the different areas in various occupancies.

5-8.4.4 The Fire Inspector II shall demonstrate an ability to evaluate the tests and test reports of fire doors.

5-8.4.5 The Fire Inspector II shall demonstrate a working knowledge of where rated building construction may be required for various occupancies.

5-8.4.6 The Fire Inspector II shall demonstrate a working knowledge of the conditions which require that special fire related building components be installed including, but not limited to, fire stops, draft curtains, fire walls, smoke vents, chimneys, flues, rated ceilings, and fire windows.

5-8.5 Building Equipment.

5-8.5.1 The Fire Inspector II shall demonstrate a working knowledge of the conditions which require that fire related equipment be installed including, but not limited to, extinguishing systems, alarm systems, detection systems, fire dampers, kitchen hood and vent systems, standpipe and hose systems, and portable fire extinguishers.

5-8.5.2 The Fire Inspector II shall demonstrate a working knowledge of the proper installation of the equipment included in 5-8.5.1.

5-8.6 Decorations, Decorative Materials and Furnishings.

5-8.6.1 The Fire Inspector II shall demonstrate an ability to evaluate the tests and test reports on flame spread and smoke generation of decorations, decorative materials and furnishings.

5-8.7 Fire Loads.

5-8.7.1 The Fire Inspector II shall demonstrate an ability to calculate fire loads.

5-8.7.2 The Fire Inspector II shall demonstrate a working knowledge of acceptable fire loads for various occupancies.

5-8.7.3 The Fire Inspector II shall demonstrate knowledge of how to classify building contents according to hazard.

5-8.8 Occupant Loads.

5-8.8.1 The Fire Inspector II shall demonstrate an ability to calculate allowable occupant loads for various occupancies and building areas.

5-8.9 The Fire Inspector II shall have a working knowledge of code requirements, regulations, basic operational features and fire hazards presented by various occupancies.

5-8.10 The Fire Inspector II shall demonstrate a working knowledge of the fire safety regulations and code requirements for

industrial occupancies utilizing hazardous processes, equipment or materials.

5-9 Code Enforcement.

5-9.1 The Fire Inspector II shall demonstrate a basic knowledge of fire scene photography.

5-9.2 The Fire Inspector II shall demonstrate a basic knowledge of the legal requirements pertaining to the admissibility of photographs in a civil or criminal court.

5-9.3 Plans and Specifications.

5-9.3.1 The Fire Inspector II shall demonstrate a basic knowledge of acceptable blueprint reading practices and symbols related to construction plans and specifications.

5-9.3.2 The Fire Inspector II shall demonstrate an ability to read and interpret construction plans and specifications.

5-9.3.3 The Fire Inspector II shall demonstrate a basic knowledge of acceptable construction methods and materials related to fire safety.

5-9.3.4 The Fire Inspector II shall demonstrate a knowledge of sources of detailed and technical information relative to plans and specification details.

5-9.3.5 The Fire Inspector II shall demonstrate a knowledge of the moral and legal responsibilities relative to plans and specifications examination.

5-10 Emergency Evacuation Plans.

5-10.1 The Fire Inspector II shall demonstrate an ability to develop emergency evacuation plans for various occupancies.

5-10.2 The Fire Inspector II shall demonstrate a basic knowledge of anticipated human behavior during emergencies.

5-10.3 The Fire Inspector II shall demonstrate an ability to implement fire safety programs for crowd control.

5-10.4 The Fire Inspector II shall demonstrate a basic knowledge of the role played by each agency and person in implementing an emergency evacuation plan.

5-10.5 The Fire Inspector II shall demonstrate an ability to coordinate agencies involved in the development of an emergency evacuation plan.

5-10.6 The Fire Inspector II shall demonstrate a knowledge of

the sources of technical and detailed information relative to emergency evacuation plans.

5-11 Fire Cause Determination.

5-11.1 The Fire Inspector II shall demonstrate a working knowledge of fire cause determination procedures.

5-12 Miscellaneous.

5-12.1 The Fire Inspector II shall demonstrate a knowledge of building code requirements as they may affect fire safety for the jurisdiction in which he is employed.

5-12.2 The Fire Inspector II shall demonstrate a knowledge of building height and area limitations as they may affect fire behavior.

Chapter 6 Fire Inspector III

(See Section 1-3.3.4.)

6-1 Administration.

6-1.1 Fire Safety Legislation.

6-1.1.1 The Fire Inspector III shall demonstrate an ability to recognize the need for and develop fire safety legislation or regulations as they may be necessary.

6-1.1.2 The Fire Inspector III shall demonstrate a basic knowledge of the various systems of government which affect the performance of his duty.

6-1.1.3 The Fire Inspector III shall demonstrate a knowledge of the process for developing fire safety legislation.

6-1.1.4 The Fire Inspector III shall demonstrate a knowledge of which sources can provide information and technical assistance in the development of fire safety legislation.

6-2 Management Functions.

6-2.1 The Fire Inspector III shall demonstrate a basic knowledge of elementary management systems and procedures.

6-2.2 The Fire Inspector III shall demonstrate an understanding of the importance of maintaining proper records.

6-2.3 The Fire Inspector III shall demonstrate a basic knowledge of the types and requirements of data collection systems which affect the performance of his duties.

6-2.4 The Fire Inspector III shall demonstrate a basic knowledge of how to use statistics in fire prevention programs.

6-2.5* The Fire Inspector III shall be able to supervise personnel, evaluate the effectiveness of supervision at various levels and interpret the evaluation for correcting deficiencies.

6-2.6 The Fire Inspector III shall demonstrate an understanding of how licenses and permits serve a fire prevention cause.

6-2.7 The Fire Inspector III shall demonstrate a knowledge of examination development and techniques for evaluating personnel skills relative to fire prevention and other related fire safety fields. *(See NFPA No. 1041, Standard for Fire Service Instructor Professional Qualifications.)*

6-2.8 The Fire Inspector III shall demonstrate a basic knowledge of the budgeting systems and process utilized by his jurisdiction.

6-2.9 The Fire Inspector III shall demonstrate an ability to coordinate the activities of his agency with other agencies and jurisdictions.

Chapter 7 Fire Investigator II

(See Section 1-3.4.1.)

7-1* Candidate Requirements. The candidate for Fire Investigator II shall meet the minimum state training standards for law enforcement officers when mandated by local or state law or the authority having jurisdiction.

7-2. General.

7-2.1 The Fire Investigator II shall demonstrate a knowledge of the legally established responsibilities and empowerment related to the performance of his duties.

7-2.2 The Fire Investigator II shall demonstrate a knowledge of fire alarm procedures and operations, particularly the receipt and processing of alarms.

7-2.3 The Fire Investigator II shall demonstrate a knowledge of basic investigative procedures.

7-2.4 The Fire Investigator II shall demonstrate a basic knowledge of interview techniques.

7-2.5 The Fire Investigator II shall demonstrate a basic knowledge of procedures and techniques for questioning suspects.

7-2.6 The Fire Investigator II shall demonstrate a skill in taking notes.

7-2.7 The Fire Investigator II shall demonstrate a skill in accepted sketching and diagraming methods.

7-2.8 The Fire Investigator II shall demonstrate a knowledge of anticipated human motivation and behavior patterns related to false alarms, fire, explosions and incendiarism and the motives therefore.

7-2.9 The Fire Investigator II shall demonstrate an ability to read and interpret basic construction plans.

7-2.10 The Fire Investigator II shall demonstrate a basic knowledge of construction methods and materials and their effect on fire and fire spread.

7-2.11 The Fire Investigator II shall demonstrate a basic knowledge of the reaction of materials to fire and heat.

7-2.12 The Fire Investigator II shall demonstrate a basic knowledge of the fire characteristics of household products and furnishings that are likely to be found in the home.

7-2.13 The Fire Investigator II shall demonstrate a basic knowledge of explosives and explosion characteristics.

7-2.14 The Fire Investigator II shall demonstrate a knowledge of personal safety practices and procedures in the performance of his duties at the fire scene.

7-2.15 The Fire Investigator II shall demonstrate an ability to safely and effectively use firearms when the fire investigator is required or authorized to bear arms.

7-2.16 The Fire Investigator II shall demonstrate a knowledge of fire reports and the reporting procedures used in the investigation of fires.

7-2.17 The Fire Investigator II shall demonstrate a knowledge of surveillance techniques.

7-3 Legal.

7-3.1 The Fire Investigator II shall demonstrate a working knowledge of the laws and procedures related to search and seizure.

7-3.2 The Fire Investigator II shall demonstrate a working knowledge of the laws and procedures related to evidence.

7-3.3 The Fire Investigator II shall demonstrate a basic knowledge of the judicial system relative to the performance of his duties.

7-3.4 The Fire Investigator II shall demonstrate a basic knowledge of the admissibility of evidence in a court of law.

7-3.5 The Fire Investigator II shall demonstrate a basic knowledge of what constitutes negligence or criminal action on the part of the perpetrator.

7-3.6 The Fire Investigator II shall demonstrate a knowledge of the procedures for obtaining and serving warrants.

7-3.7 The Fire Investigator II shall demonstrate a basic knowledge of legal terms associated with the performance of his duties.

7-3.8 The Fire Investigator II shall demonstrate a basic knowledge of legal prosecution case preparation procedures associated with the performance of his duties.

7-3.9 The Fire Investigator II shall demonstrate a knowledge of the legal parameters relative to statements including confessions.

7-3.10 The Fire Investigator II shall demonstrate a knowledge of the legal requirements relative to surveillance.

7-3.11 The Fire Investigator II shall demonstrate a knowledge of the individual's rights and the requirements relative thereto.

7-3.12 The Fire Investigator II shall demonstrate a knowledge of the legal parameters involving the questioning of suspects.

7-3.13* The Fire Investigator II shall demonstrate a knowledge of arrest procedures.

7-3.14 The Fire Investigator II shall demonstrate a knowledge of how to take a statement.

7-4 Evidence Collection.

7-4.1 The Fire Investigator II shall demonstrate a knowledge of what constitutes admissible evidence in a court of law.

7-4.2 The Fire Investigator II shall demonstrate an ability to secure and protect evidence and the legal parameters relative to evidence security.

7-4.3 The Fire Investigator II shall demonstrate an ability to recognize evidence or potential evidence.

7-4.4 The Fire Investigator II shall demonstrate a knowledge of and the ability to operate detection equipment associated with fire investigations.

7-4.5 The Fire Investigator II shall demonstrate a basic knowledge of laboratory requirements for processing evidence.

7-4.6 The Fire Investigator II shall demonstrate a knowledge of evidence identification procedures.

7-5 Photography.

7-5.1 The Fire Investigator II shall demonstrate an ability to operate basic photography equipment and reasonable skill in taking pictures under various conditions.

7-5.2 The Fire Investigator II shall demonstrate a knowledge of security measures and identification procedures related to photographs.

7-5.3 The Fire Investigator II shall demonstrate a knowledge of how photographs may be used in prosecuting an investigation case.

7-5.4 The Fire Investigator II shall demonstrate a basic knowledge of the admissibility of photographic evidence in a court of law.

7-6 Fire Scene Examination.

***7-6.1** The Fire Investigator II shall demonstrate a knowledge of char and burn pattern characteristics of common materials.

7-6.2 The Fire Investigator II shall demonstrate a knowledge of factors affecting fire spread.

7-6.3 The Fire Investigator II shall demonstrate a knowledge of color and density of smoke and flame and heat characteristics for various materials.

7-6.4 The Fire Investigator II shall demonstrate a knowledge of material burning rate and heat release characteristics for various materials.

7-6.5 The Fire Investigator II shall demonstrate an ability to determine the perpetrator's method of entry.

7-6.6 The Fire Investigator II shall have a working knowledge of how to determine the point of origin in a fire.

7-6.7 The Fire Investigator II shall have a working knowledge of how to establish probable cause of fire.

7-6.8 The Fire Investigator II shall demonstrate an ability to determine what may be considered unusual at a fire scene.

7-6.9 The Fire Investigator II shall demonstrate an ability to reconstruct the fire scene.

7-6.10 The Fire Investigator II shall demonstrate a general knowledge of estimation of loss caused by fire.

7-7 Records, Reports, and Documents.

7-7.1 The Fire Investigator II shall demonstrate an ability to complete and file reports relative to fire investigation.

7-7.2 The Fire Investigator II shall demonstrate a basic knowledge of insurance policy types and how they affect a fire investigation.

7-7.3 The Fire Investigator II shall demonstrate a basic knowledge of inventory and record keeping systems.

7-7.4 The Fire Investigator II shall demonstrate a basic knowledge of the purpose of various property documents such as leases, deeds, liens, garnishments, judgements, etc., and their importance in fire investigation.

7-7.5 The Fire Investigator II shall demonstrate a knowledge of where various records, reports, and/or documents pertaining to suspects and premises involved in fire may be found or are likely to be filed.

7-7.6 The Fire Investigator II shall demonstrate a knowledge of the legal requirements for reviewing or obtaining records, reports, or documents.

7-7.7 The Fire Investigator II shall demonstrate a knowledge of various criminal reporting procedures and systems and their use.

7-7.8 The Fire Investigator II shall demonstrate a knowledge of other records which may be used in an investigation including, but not limited to, medical records, school records, telephone records, employment records and police records.

7-7.9 The Fire Investigator II shall demonstrate an understanding of the purpose for each type of record, report or document which may be used in an investigation.

7-8 Other Agencies.

7-8.1 The Fire Investigator II shall demonstrate a knowledge of which agencies may provide assistance in fire investigation activities.

7-8.2 The Fire Investigator II shall demonstrate a knowledge of how to request assistance from other agencies.

7-9 Courtroom.

7-9.1 The Fire Investigator II shall demonstrate a knowledge of general courtroom procedures.

7-9.2 The Fire Investigator II shall demonstrate a knowledge of the various trial procedures and judicial parameters.

7-9.3 The Fire Investigator II shall demonstrate a knowledge of recommended courtroom demeanor.