

(B) Requisite Skills. Ability to evaluate and prioritize hazards, utilize critical thinking to analyze the hazard, select the most appropriate control measure, and evaluate its effectiveness in enhancing fire fighter safety.

4.11.3 Develop recommendations for changes in equipment, procedures, and methods based on results of evaluations; given recommendations from the fire department occupational safety and health committee, safety audits, an analysis of injury statistics or other reliable sources of hazardous conditions or injury data, so that the recommendations for equipment, procedures and methods can be accepted and approved in accordance with the AHJ.

(A) Requisite Knowledge. Hazard recognition, assessment, controls, and evaluation; health and safety recommendations; use of safety audits; injury statistics.

(B) Requisite Skills. Analyze and interpret injury statistics; interpersonal skills; and report writing.

4.11.4 Verify medical advice and treatment are available to members of the fire department, given a fire department physician, fire department members, understanding of occupational medicine for the fire service and the IAFF/IAFC Fire Service Joint Labor Management Wellness-Fitness Initiative, so that members receive the necessary information to maximize their health, wellness, and safety.

(A) Requisite Knowledge. Medical requirements for members as specified in NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, and IAFC/IAFF Joint Labor Management Wellness-Fitness Initiative; health hazards associated with fire fighting; and current occupational health, wellness, and safety practices.

(B) Requisite Skills. Organizational skills, communication skills, and interpersonal skills.

4.11.5* Provide information and assistance regarding risks that may impact operations, given a scenario, the fire department's risk management plan, SOP/Gs, so that members can perform their job tasks in a safe and effective manner.

(A) Requisite Knowledge. Procedures for conducting job tasks based on department SOP/Gs, the department's risk management plan, health and safety policies used by the AHJ, and the technical knowledge necessary to perform various job tasks.

(B) Requisite Skills. Ability to evaluate and prioritize hazards, utilize critical thinking to analyze the hazard, select the most appropriate control measure, and evaluate its effectiveness in enhancing fire fighter safety.

4.12 Infection Control.

4.12.1 Assess the fire department's infection control program, given a copy of the department's program, incident reports, and access to infection control equipment and facilities, so that the requirements of the Ryan White HIV/AIDS Treatment Extension Act (S.1793) and Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines, 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens," and NFPA 1581, *Standard on Fire Department Infection Control Program*, are met.

(A) Requisite Knowledge. SOP/Gs, Ryan White HIV/AIDS Treatment Extension Act (S.1793) and Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines, 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens," and NFPA 1581, *Standard on Fire Department Infection Control Program*.

(B) Requisite Skills. Acquire and document infection control procedures; coordination skills necessary to revise program; assess the requirements based on Ryan White HIV/AIDS Treatment Extension Act (S.1793) and Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines, 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens," and NFPA 1581, *Standard on Fire Department Infection Control Program*.

4.12.2 Function as the fire department infection control officer, if an infection control officer position does not exist in the fire department, given an infection control scenario, so that the objectives of the infection control program as specified in the requirements of Ryan White HIV/AIDS Treatment Extension Act (S.1793) and Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines, 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens"; and NFPA 1581, *Standard on Fire Department Infection Control Program*, are met.

(A) Requisite Knowledge. The Ryan White HIV/AIDS Treatment Extension Act (S.1793); Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines; 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens"; and NFPA 1581, *Standard on Fire Department Infection Control Program*; and roles and responsibilities of an infection control officer.

(B) Requisite Skills. Acquire and document infection control procedures; coordination skills necessary to revise program; assess the requirements based on the Ryan White HIV/AIDS Treatment Extension Act (S.1793), Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines, 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens," and NFPA 1581, *Standard on Fire Department Infection Control Program*; integrate the occupational health and safety aspects of the risk management program into infection control training and education programs, and educate members.

Chapter 5 Incident Safety Officer

5.1 General.

5.1.1 The fire department incident safety officer (ISO) shall meet the requirements of Fire Officer Level I specified in NFPA 1021, *Standard for Fire Officer Professional Qualifications*, and the job performance requirements (JPRs) defined in Sections 5.2 through 5.7.

5.1.2* A fire department ISO shall recuse himself/herself from any investigatory process where a conflict of interest exists.

5.2 General Requirements.

5.2.1 Perform the role of ISO within an incident command system (ICS) at an incident or planned event, given an incident or planned event, an ICS structure, a command post, a briefing from an incident commander (IC) or outgoing ISO, SOP related to health and safety, an incident action plan (IAP), applicable protective clothing and protective equipment, and communications and information recording equipment, so that the assignment is received and understood; situational information about the incident or planned event is received; incident priorities, goals, and objectives are transferred; action is taken to mitigate any immediate life safety threats; and applicable communication means are employed.

(A) Requisite Knowledge. Understand accepted safety and health principles, including issues such as the hierarchy of

controls, specific technical or regulatory areas pertinent to the response, and the accepted management principles needed to promote safety in the response environment. [1026:5.2.1(A)]

(B) Requisite Skills. Prioritizing tasks, making decisions in an environment with a large number of unknowns, evaluating resource needs, recognizing the need for supplemental technical knowledge, and taking action in a proactive manner to ensure responder safety and health. [1026:5.2.1(B)]

5.2.2* Monitor the IAP, conditions, activities, and operations, given an incident or planned event, an IAP, and risk management assessment criteria, so that activities and operations that involve an unacceptable level of risk can be altered, terminated, or suspended to protect members' health and safety.

(A) Requisite Knowledge. Comprehensive knowledge of incident hazards, applicable legislation, regulations, codes, and standards, the incident management system (IMS), recognized safety practices, risk management criteria, including what constitutes unacceptable level of risk; and fire department operations, training materials, and SOP/Gs.

(B) Requisite Skills. Ability to apply knowledge of fire behavior and fire dynamics, building construction, department SOP/Gs, training materials, and applicable safety practices in a risk management assessment to determine the most appropriate actions to minimize health and safety risks.

5.2.3 Manage the transfer of ISO duties, given an incident or planned event, an established command structure and ISO, an IAP, an incident safety plan, a current situation status, incident resources, a command post, incident documentation, and communications equipment, so that incident information is exchanged, reports and plans for the subsequent operational period are completed, continuity of authority and situational awareness are maintained, changes in incident or planned event complexity are accounted for, the new ISO is briefed on the incident or planned event, and the new ISO is identified.

(A) Requisite Knowledge. AHJ's procedures for transfer of duty; information sources; resource accountability and tracking process; use of IMS forms; the role and duties of an ISO within an IMS; organizational policies and procedures for safety; accountability protocols; resource types and deployment methods; documentation methods and requirements; availability, capabilities, and limitations of responders and other resources; communication problems and needs; communications requirements; operational periods for ISO functions; and types of tasks and assignment responsibilities.

(B) Requisite Skills. Conducting a transfer briefing meeting; acquiring and documenting information and orders from the IC; using reference materials; evaluating incident information; managing communications; completing required ICS and health and safety forms; recognizing the need to expand and/or transfer the safety function in the ICS structure; reviewing, understanding, and conducting a transfer of duty briefing, including the completion of the transfer documents; and communicating in a manner such that information is transferred and objectives are met. [1026:5.2.2(B)]

5.2.4 Stop, alter, or suspend operations based on imminent threats posed to fire fighter safety, given an incident or planned event that contains threats to fire fighter safety, an incident management structure, risk management criteria, and applicable SOP/Gs, so that the hazard is identified, notice to suspend operations is communicated, action is taken to

protect fire fighter safety, and this information is communicated to the IC.

(A) Requisite Knowledge. Knowledge of what constitutes imminent hazards at an incident or planned event that could impact fire fighter safety, IMS, radio protocols and transmission procedures, fire behavior/dynamics, hazardous energy, reading smoke, building construction, and departmental SOP/Gs and training materials.

(B) Requisite Skills. Ability to evaluate hazards; determine the relative degree of risk to members and whether they pose an imminent threat to fire fighter safety; use of department radios and communication abilities.

5.2.5 Monitor and determine the incident scene conditions, given an incident or planned event, so that the ISO can report to the IC on the status of hazards and risks to members.

(A) Requisite Knowledge. Knowledge of what constitutes hazards at an emergency incident, the IMS, radio protocols and transmission procedures, incident hazards, and departmental SOP/Gs.

(B) Requisite Skills. Ability to evaluate hazards, determine the relative degree of risk to members, prioritize the risks, and communicate this information to the IC.

5.2.6 Monitor the accountability system, given an incident or planned event, an IMS, personal identification devices, radios, and applicable SOP/Gs, so that it can be determined that the accountability system is being utilized as designed, all relevant positions and functions are implemented, and any noted deficiencies are communicated to the IC.

(A) Requisite Knowledge. Knowledge of incident management system, department accountability system positions and protocols, radio protocols and transmission procedures, and departmental SOP/Gs.

(B) Requisite Skills. Ability to recognize inadequacies in the use of the accountability system.

5.2.7* Determine hazardous incident conditions and advise the IC to establish or modify control zones, given an incident, so that the incident control zones are communicated to members and entry into the hazardous area is controlled.

(A) Requisite Knowledge. Comprehensive knowledge of hazardous conditions, operations, departmental SOP/Gs and training materials, control zones protocols, and the IMS.

(B) Requisite Skills. Ability to evaluate the effect of proximity for incident hazards so that risk to members will be limited to emergency responders assigned tasks to mitigate the incident.

5.2.8 Identify motor vehicle incident scene hazards, given an apparatus and temporary traffic control devices, an incident or planned event, so that actions to mitigate the hazards as described in Section 8.7 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, are taken to protect member safety.

(A) Requisite Knowledge. Knowledge of hazards associated with vehicle incidents and apparatus placement, the IMS, departmental SOP/Gs and training materials, state/provincial and local traffic regulations, risk management principles and criteria, and applicable safety principles and practices.

(B) Requisite Skills. Ability to apply knowledge of hazards and regulations to an incident within a risk management framework to protect member safety.

5.2.9 Monitor radio transmissions; given an incident or planned event with radio transmissions, so that communication barriers are identified and the possibility for missed, unclear, or incomplete communications is corrected.

(A) Requisite Knowledge. Knowledge of radio protocols and transmission procedures, the IMS, emergency incident hazards, and departmental SOP/Gs.

(B) Requisite Skills. Ability to recognize missed, unclear, or incomplete communications.

5.2.10* Identify the incident strategic requirements (e.g., fire, technical rescue, hazmat), the corresponding hazards, the size, complexity and anticipated duration of the incident, including the associated risks, given an incident or planned event, an IMS, and applicable SOP/Gs, so that the ISO can determine the need for assistant ISOs and/or technical specialists and make the recommendations to the IC.

(A) Requisite Knowledge. Comprehensive knowledge of incident hazards; applicable legislation, regulations, codes, and standards; the IMS; recognized safety practices; risk management criteria, including what constitutes unacceptable level of risk; and fire department operations, training materials, and SOP/Gs.

(B) Requisite Skills. Ability to recognize the types of hazards that might require additional ISOs or technical specialists, and applicable safety practices.

5.2.11 Determine the hazards associated with the designation of a landing zone and interface with helicopters, given an incident or planned event that requires the use of a helicopter and landing zone, so that the IC can be informed of special requirements and the landing can be executed in a safe manner.

(A) Requisite Knowledge. Helicopter and landing zone requirements; hazards associated with helicopters and landing zones; safety issues associated with landing zones; and the IMS.

(B) Requisite Skills. Ability to recognize landing zone locations and hazards.

5.2.12* Notify the IC of the need for intervention resulting from an occupational exposure to atypical stressful events, given an incident or planned event and an awareness of incidents that can cause incident stress, so that members' psychological health and safety can be protected.

(A) Requisite Knowledge. Knowledge of incidents that can lead to occupational exposure to atypical stress, the signs and symptoms of occupational exposure to atypical stress, the difference between *debriefing* and *defusing*, and support teams and other resources to provide assistance.

(B) Requisite Skills. Ability to recognize signs and symptoms of occupational exposure to atypical stress; an accepting and empathetic demeanor; and good communication skills.

5.2.13* Determine hazardous energy sources that can affect responder health and safety, given an incident or planned event, an active IAP with assigned responders, and an opportunity to perform environmental and operational reconnaissance, so that risks to personnel are identified, reduced, or eliminated; hazard information is relayed to IC staff and ancillary agencies responsible for the hazardous energy source; appropriate zones are established and marked; and personnel operating at the scene are briefed on the hazardous energy control zone.

(A) Requisite Knowledge. Common component assemblies for hazardous energy sources, including but not limited to gas,

electrical, water, and pressure vessels; hazardous properties of common utility gases; common electrical distribution grid components and arrangements; and control zone marking schemes as defined by 8.6.2 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*.

(B) Requisite Skills. Critical identification, analysis, and judgment abilities; prioritizing to address hazards on a most critical-first basis; communicating hazard information to personnel via the incident safety plan, IAP, face-to-face, radio, and safety briefings; determining boundaries and markings for control zones; formulating recommendations for IC action; exercising authority to suspend imminent danger operations; and anticipating evolving site conditions that require IAP changes.

5.2.14 Monitor conditions, including weather, fire fighter activities, and work cycle durations, given an incident or planned event, so that the need for rehabilitation can be determined, communicated to the IC, and implemented to ensure fire fighter health and safety.

(A) Requisite Knowledge. Comprehensive knowledge of heat and cold assessment criteria, rehabilitation strategies, including NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*, SOP/Gs and training materials; available resources that can be used for rehabilitation, signs and symptoms of cardiac stress, and heat and cold stress.

(B) Requisite Skills. Ability to recognize signs of cardiac, heat, and cold stress; set up a rehab area and ensure that members use it as designed.

5.3 Fire Suppression Operations.

5.3.1* Determine incident environmental and operational factors and confirm the establishment of rapid intervention crew (RIC) and evaluate the need to increase RIC capability, given an incident or planned event that includes one or more immediately dangerous to life and health (IDLH) elements, responders engaged in tactical operations, a pre-assigned RIC, and an IAP, so that a recommendation is offered to the IC.

(A) Requisite Knowledge. RIC criteria for NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; NFPA 1561, *Standard on Emergency Services Incident Management System*; NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*; NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*; AHJ SOP/Gs; and directives for RIC establishment and use.

(B) Requisite Skills. Interpret applicable regulations, guidelines, procedures, and consensus standards for implementation at incidents; audit conditions to ensure policies are being followed; and formulate recommendations for incident command action.

5.3.2* Communicate fire behavior, building access/egress issues, collapse, and hazardous energy issues to established RICs, given an incident or planned event, so that RIC team leaders are aware of the observations and concerns of the ISO.

(A) Requisite Knowledge. Structural/compartmentalized fire behavior, building construction features and associated hazards, and hazardous energy properties and components.

(B) Requisite Skills. Ability to interpret fire suppression hazards and operations and communicate through face-to-face and radio methods.

5.3.3* Identify and estimate building/structural collapse hazards, given a building fire incident, a building collapse incident, reconnaissance opportunity, and established AHJ pre-incident building plan information, so that the identified collapse hazard can be communicated to the IC and tactical-level management units; judgment is offered to the IC for the establishment of control zone(s); personnel are removed from collapse zone dangers; and appropriate adjustments are made to the IAP by the IC to improve member safety.

(A) Requisite Knowledge. Building construction classifications and associated hazards; structural fire collapse indicators; building fire spread; fire effects on building materials, loads, and forces; structural conditions that warrant stopping, altering, or suspending incident or planned event operations; procedures for managing unsafe acts or operations and procedures for notifying command of stopped, altered, or suspended operations; methods for determining collapse zone distances; and AHJ pre-incident target building hazards.

(B) Requisite Skills. Critical identification, analysis, and judgment abilities; applying AHJ building fire preplan systems at actual incidents; interpreting collapse hazards; communicating hazard information to personnel via the incident safety plan, IAP, face-to-face, radio, and safety briefings; determining boundaries and markings for control zones; formulating recommendations for incident command action; exercising authority to suspend imminent danger operations; and anticipating evolving site conditions that require IAP changes.

5.3.4* Determine flashover and hostile fire event potential at building fires, given an incident, so that risks are identified and communicated to the incident commander and tactical-level management units, and adjustments are made to strategy and tactics to improve safety.

(A) Requisite Knowledge. Compartmentalized fire behavior theory, flashover and other hostile fire incident indicators, ventilation flow path, fire-load (fuel) characteristics, effects of fire-fighting efforts on fire behavior.

(B) Requisite Skills. Critical identification, analysis, and judgment abilities; reading smoke (volume, velocity, density, and color); and communicating fire behavior concerns through face-to-face and radio methods.

5.3.5* Determine fire growth and blow up, given wildland and cultivated vegetation fires, so that information can be communicated to the IC and tactical-level management components, and adjustments made to the IAP to improve member safety.

(A) Requisite Knowledge. Wildland and vegetation fire behavior and wildland fire phenomena such as blow ups and flaring.

(B) Requisite Skills. Critical identification, analysis, and judgment abilities; interpreting fuel, topography, flame length, and weather effects on wildland and vegetation fires; and communicating fire behavior concerns through face-to-face and radio methods.

5.3.6 Determine the suitability of building entry and egress options at building fires, given various building fire incidents, so that entry and egress options are optimized through communication with the IC and tactical-level management components.

(A) Requisite Knowledge. Building construction access and egress challenges; AHJ building pre-fire systems; fire-fighting equipment capabilities, and AHJ fire-fighting resource capabilities.

(B) Requisite Skills. Critical identification, analysis and judgment abilities; and communicating access and egress concerns through face-to-face and radio methods.

5.4 Technical Rescue Operations.

5.4.1* Determine the need for a rescue technician-trained ISO or assistant ISO, given a technical rescue incident, CFR 1910.146; NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*, and AHJ SOP/Gs for technical rescue operations, so that the IC can appoint an assistant ISO or a technical rescuer.

(A) Requisite Knowledge. Technical rescue incident types as defined in NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*, and AHJ SOP/Gs for technical rescue operations.

(B) Requisite Skills. Identifying technical rescue incident resource needs and forecasting stabilization strategies.

5.4.2 Prepare a safety plan that identifies corrective or preventive actions, given a technical rescue incident, an IAP that includes situation and resource status information, an incident safety analysis form (ICS form 215A or its equivalent), weather condition information, special technical data (such as safety data sheets and topographical information, blueprints, and building drawings), and predetermined incident information, so that safety data are obtained, an incident safety plan is developed with coordinating documentation, elements of the plan are incorporated in the IAP, changes in incident safety conditions are noted and reported, judgment is offered to the IC for the establishment of control zone(s) and exclusion zone(s), safety and appropriate PPE elements are met, and assistant ISOs are appointed as necessary.

(A) Requisite Knowledge. Risk management principles; technical rescue operations strategies and tactics; hazard mitigation and countermeasure strategies; NIMS IAP and planning processes; NIMS documentation system; NFPA 1951, *Standard on Protective Ensembles for Technical Rescue Incidents*, 29 CFR 1910.146; and AHJ SOP/Gs for hazardous materials operations.

(B) Requisite Skills. Critical identification, analysis, and judgment abilities; communicating safety issues within the command structure; and reading/editing technical documentation.

5.4.3* Deliver a safety briefing for technical rescue incident response members, given a technical rescue incident, so that critical information such as expected hazards, PPE requirements, established zones, emergency procedures, air monitoring, medical surveillance, and chain-of-command elements are communicated.

(A) Requisite Knowledge. OSHA 29 CFR 1910.146 requirements for a site safety and health plan; NIMS forms and ICS processing criteria; general technical rescue operations safety strategies; and AHJ technical rescue SOP/Gs.

(B) Requisite Skills. Ability to communicate critical messages in written and oral formats.

5.5 Hazardous Materials Operations.

5.5.1* Determine the need for a hazardous materials technician-trained ISO or assistant ISO, given a hazardous materials incident, 29 CFR 1910.120; NFPA 472, *Standard for Competency for Responders to Hazardous Materials/Weapons of Mass Destruction*

Incidents, and AHJ SOP/Gs for hazardous materials operations, so that the IC can appoint an assistant ISO or a hazardous materials technician.

(A) **Requisite Knowledge.** Hazardous materials incident types as defined in NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, and AHJ SOP/Gs for hazardous materials operations.

(B) **Requisite Skills.** Identifying hazardous materials incident resource needed; forecasting stabilization strategies.

5.5.2 Prepare a safety plan that identifies corrective or preventive actions, given a hazmat incident, IAP that includes situation and resource status information, an incident safety analysis form (ICS form 215A or its equivalent), weather condition information, special technical data (such as safety data sheets and topographical information, blueprints, and building drawings), and predetermined incident information, so that safety data are obtained, an incident safety plan is developed with coordinating documentation, elements of the plan are incorporated in the IAP, changes in incident safety conditions are noted and reported, judgment is offered to the IC for the establishment of control zone(s) and exclusion zone(s), safety and PPE elements of 29 CFR 1910.120 are met, and assistant ISOs are appointed as necessary.

(A) **Requisite Knowledge.** Risk management principles; hazardous materials operations strategies and tactics; hazard mitigation and countermeasure strategies; NIMS IAP and planning processes; NIMS documentation system; and AHJ SOPs/Gs for hazardous materials operations.

(B) **Requisite Skills.** Critical identification, analysis, and judgment abilities; communicating safety issues within the command structure; and reading/editing technical documentation.

5.5.3* Deliver a safety briefing for hazardous materials incident response members, given a hazmat incident or scenario, so that critical information such as expected hazards, PPE requirements, established zones, decontamination procedures, emergency procedures, air monitoring, medical surveillance, and chain-of-command elements are communicated.

(A) **Requisite Knowledge.** OSHA 29 CFR 1910.120 requirements for a site safety and health plan; NIMS forms and ICS processing criteria; general hazmat operations safety strategies; and AHJ hazmat SOPs/Gs.

(B) **Requisite Skills.** Ability to communicate critical messages in written and oral formats.

5.5.4* Identify that hazardous materials incident control zones have been established and communicated to personnel on the scene, given a hazardous materials incident and SOP/Gs, so that responders can identify marked control zones, which must be inclusive of no-entry zones, hot zones, hazard reduction zones, support zones, and corridors.

(A) **Requisite Knowledge.** Common zoning strategies for hazardous materials operations, methods of marking zones, and AHJ SOP/Gs for zone communication; NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, and other applicable NFPA documents.

(B) **Requisite Skills.** Ability to adapt zoning strategies to individual incident challenges such as topography, weather, and resource variants.

5.6 Accident Investigations and Review.

5.6.1* Conduct a safety and health investigative process, given an incident or planned event, using applicable documents

and techniques, so that the chain of evidence is started and maintained, critical incident data elements are collected, potential witnesses are identified, applicable SOP/Gs are identified for review, and gathered information is documented and prepared for the HSO or investigative continuance as established by the AHJ policies and SOP/Gs.

(A) **Requisite Knowledge.** Procedures for conducting, documenting, recording, and reporting a safety investigation, SOP/Gs and health and safety investigative policies used by the AHJ; procedures for preserving evidence and documentation; and the technical knowledge pertinent to the incident under investigation.

(B) **Requisite Skills.** Analyzing information from different data sources; identifying equipment and materials that might be considered evidence; interacting with or interviewing personnel associated with the incident, often under conditions of personal stress; completing safety investigation documentation; identifying cause(s) of injury, death, or property damage; and determining corrections to prevent similar losses in the future.

5.7 Post-Incident Analysis (PIA).

5.7.1* Prepare a written post-incident analysis (PIA) from the ISO perspective, given a witnessed incident, exercise, or planned event, so that safety and health issues, best safety practices, deviations from SOP/Gs established by the AHJ, and recommendations for future events are documented.

(A) **Requisite Knowledge.** NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; PIA reporting criteria; and AHJ SOP/Gs for PIAs.

(B) **Requisite Skills.** Transferring incident observations into field notes and documenting field notes into a formal PIA structure.

5.7.2* Report observations, concerns, and recommendations, given a witnessed incident or planned event and PIA group setting, so that that safety and health issues, best safety practices, deviations from SOP/Gs established by the AHJ, and recommendations for future events are communicated to the AHJ.

(A) **Requisite Knowledge.** Group dynamics in problem solving.

(B) **Requisite Skills.** Active listening skills; and composing and relaying constructive information in a group setting.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.2 The committee believes that this document specifies the minimum JPRs for HSO and ISO for a fire department. The committee recognizes that emergency services organizations might have to invest considerable resources to provide the equipment and training needed to perform safely and efficiently. The committee does not mean to imply that organizations with limited resources cannot provide response services, only that the individuals charged with responsibilities are qualified to specific levels according to this standard.

A.1.2.3 Organization/management responsibilities should be addressed by the agency that personnel represent. The AHJ should define the agency requirements for progression to positions of management responsibility.

A.1.2.6 The committee recognizes the importance of formal continuing education and training programs to ensure HSOs and ISOs have maintained and updated the necessary skills and knowledge for the level of qualification. Continuing education and training programs can be developed or administered by local, state, or federal agencies as well as professional associations and accredited institutions of higher education. The methods of learning would include areas of technology, refresher training, skills practices, and knowledge application to standards. The subject matter should directly relate to the requirements of this standard.

A.1.3.5 It is recommended, where practicable, that evaluators be individuals who were not directly involved as instructors for the requirement being evaluated.

A.1.3.10(3) While it is possible that the HSO might not have to meet the medical requirements of NFPA 1582, it is understood that the ISO, who should have met the Level I requirements of NFPA 1021, would have also had to meet NFPA 1001 requirements to meet those of NFPA 1021. Thus, the ISO would have had to meet the medical requirements of NFPA 1001.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.3.12 Fire Department. The term *fire department* includes any public, governmental, private, industrial, or military organization providing these services.

A.3.3.13 Fire Department Facility. This does not include locations where a fire department can be summoned to perform emergency operations or other duties, unless such premises are normally under the control of the fire department. [1500, 2013]

A.3.3.17 Fire Suppression. Fire suppression includes all activities performed at the scene of a fire incident or training exercise that expose fire department members to the dangers of heat, flame, smoke, and other products of combustion, explosion, or structural collapse. [1500, 2013]

A.3.3.18 Hazard. Hazards include the characteristics of facilities, equipment, systems, property, hardware, or other objects and the actions and inactions of people that create such hazards.

A.3.3.27 Incident Management System (IMS). The system is also referred to as an incident command system (ICS). [1561, 2014]

A.3.3.30 Incident Scene. This location should include the entire area subject to incident-related hazards and all areas used by emergency services organization responders and equipment in proximity to the incident scene. [1561, 2014]

A.3.3.32 Member. A fire department member can be a full-time or part-time employee, can be a paid or unpaid volunteer, can occupy any position or rank within the fire department, and might or might not engage in emergency operations.

A.3.3.36 Occupational Safety and Health Program. This program is also referred to as the Occupational Safety and Health Management System.

A.3.3.40 Rapid Intervention Crew/Company (RIC). Emergency services personnel respond to many incidents that present a high risk to personnel safety. Departments in compliance with OSHA 29 CFR 1910.134, "Respiratory protection," must have a minimum of two persons on scene fully equipped when members are operating in an atmosphere immediately dangerous to life or health (IDLH) or a potentially IDLH atmosphere. The primary purpose is the rescue of injured, lost, or trapped fire fighters. Departments utilizing an incident management system in accordance with NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, or 29 CFR 1910.120, "Hazardous waste operations and emergency response," along with a personnel accountability system, have incorporated the RIC into their management system. Many departments have redefined their response plans to include the dispatch of an additional company (engine, rescue, or truck) to respond to incidents and stand by as the RIC. Incident commanders can assign additional RICs based on the size and complexity of the incident scene. In some departments, an RIC can also be known as a rapid intervention team. At wildland incidents this would be addressed through the planning process and contingency planning.

A.3.3.42 Rehabilitation. Rehabilitation efforts should include providing relief from extreme climate and/or incident conditions, rest and recovery, rehydration, replacement of calories and electrolytes, active cooling (or warming if necessary), medical monitoring, and member accountability.

A.3.3.45 Risk Management. The risk management process includes the identification and analysis of exposure to hazards, evaluation and prioritization of those hazards, selection of appropriate risk management techniques to mitigate exposure to those hazards, implementation of selected control measures, and monitoring of results.

Risk management is a vital component to any organization's operation, especially a fire department. Health and