Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Revise text to read as follows:

1.1* Scope. This standard identifies the minimum job performance requirements (JPRs) for land-based fire fighters responsible for fire-fighting operations aboard vessels over 50 ft (15.25m) involved in fire.

1.1.1 This standard does not address fire fighters assigned to marine fire-fighting vessels.

1.1.2 This standard does not address fire fighters assigned to vessels.

1.2* Purpose. The purpose of this standard shall be to ensure that land-based fire fighters who are responsible for fire-fighting operations aboard vessels over 50 ft (15.25m) meet the requirements of this standard.

Statement: The Committee changed the text because it makes the scope and purpose more inclusive geographically and identifies that it does not relate to fire fighters assigned to vessels.
Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Revised text as follows:

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

2.3 Other Publications.

2.4 References for Extracts in Mandatory Sections.

Statement: The Committee changed the text because the reference material needs to be current.
Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Revised text as follows:

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. Merriam-Webster's Collegiate Dictionary, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.
3.2.1 Approved. Acceptable to the authority having jurisdiction.
3.2.2 Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.
3.2.3 Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.
3.2.4 Shall. Indicates a mandatory requirement.
3.2.5 Should. Indicates a recommendation or that which is advised but not required.
3.2.6 Standard. A document, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Non-mandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions.
3.3.1 Action Plan.
3.3.1.1 Incident Action Plan. A written management plan developed or approved by the Incident Commander that establishes the overall strategic decisions and assigns tactical objectives for the incident.
3.3.1.2 Initial Action Plan. A verbal or written management plan developed by the initial Incident Commander to an incident and upon which initial incident control actions are based.
3.3.2 Bow. The front end of a boat or vessel. [1405, 2011, 2006]
3.3.3 Cold Zone. See 3.3.5.1.
3.3.4 Compartment. A subdivision of space or room in a ship.
3.3.5 Control Zones. The areas at an incident that are designated based upon safety and the degree of hazard to the fire fighter.
3.3.5.1 Cold Zone. The control zone of an incident that contains the command post and other support functions deemed necessary to control the incident.
3.3.5.2 Hot Zone. The control zone of an incident that includes the fire area or the area immediately surrounding hazardous materials and that extends far enough to prevent adverse effects from fire, products of combustion and/or hazardous materials releases to personnel outside the zone.
3.3.5.3 Warm Zone. The control zone at an incident that surrounds the hot zone and in which the fire fighter may be exposed to low levels of the products of combustion requiring standard fire fighter personal protective equipment for protection.
3.3.6 Draft. (1) The vertical distance between the water surface and the lowest point of a vessel. (2) The depth of water a vessel needs in order to float.
3.3.7 Fire Department. An organization providing rescue, fire suppression, and related activities. The term fire department shall include any public, governmental, private, industrial, or military organization engaging in this type of activity.
3.3.8 Fire Fighter.
3.3.8.1 Fire Fighter II. A person who has met the requirements of Chapters 1 through 6 of NFPA 1001, Standard for Fire Fighter Professional Qualifications. [1001, 2013, 2002]
3.3.8.2.1 Marine Fire Fighter I. A land-based Fire Fighter II at the first level of progression as defined in Chapter 4, who has demonstrated the knowledge and skills to respond to an incident and operate in the proximity of a vessel or dock area or to provide support functions in the cold and warm zone on board a vessel.
3.3.8.2.2 Marine Fire Fighter II. A land-based Fire Fighter II at the second level of progression as defined in Chapter 5.
who has demonstrated the knowledge and skills to respond to an incident and operate on a vessel while performing defensive and offensive functions inside the warm and hot zone on board a vessel.

3.3.9 Hot Zone. See 3.3.5.2.

3.3.10 Hull. The main structural frame or body of a vessel below the weather deck.

3.3.11 Immediately Dangerous to Life and Health (IDLH). Any condition that would pose an immediate or delayed threat to life, cause irreversible adverse health effects, or interfere with an individual’s ability to escape unaided from a hazardous environment. [1670, 2009 2004]

3.3.12 Incident Action Plan. See 3.3.1.1.

3.3.13 Initial Action Plan. See 3.3.1.2.

3.3.14 Job Performance Requirement (JPR). A written statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation areas for the specific task. [1000, 2011 2006]

3.3.15 List. The continuous lean or tilt of a vessel to one side due to an imbalance of weight within the vessel.

3.3.16 Marine Facility. Any land-based facility that incorporates buildings, personnel, equipment, docks, moorings, and other features to support the docking, loading, unloading, maintenance, and servicing of marine vessels.

3.3.17 Marine Incident. Any fire, explosion, hazardous material, utility, or other type of emergency incident on or in the vicinity of a marine vessel and/or facility to which a fire department can be expected to respond.

3.3.18 Master. The captain of a merchant ship. [1405, 2011 2006]

3.3.19 Mate. A deck officer on a merchant ship ranking below the master. [1405, 2011 2006]

3.3.20 Mooring. (1) Permanent anchor equipment (attached by a chain to a buoy) to which a vessel can connect a line, wire, or chain, eliminating the need to use the vessel’s anchor. (2) The act of securing a vessel. (3) The location where a vessel is berthed.

3.3.21 Personal Protective Clothing. The full complement of garments fire fighters are normally required to wear while on an emergency scene including turnout coat, protective trousers, fire-fighting boots, fire-fighting gloves, a protective hood, and a helmet with eye protection. [1001, 2013 2002]

3.3.22 Personal Protective Equipment. Full personal protective clothing, plus a self-contained breathing apparatus (SCBA) and a personal alert safety system (PASS) device.

3.3.23 Port. General area of a shore establishment having facilities for the landing, loading/unloading, and maintenance of vessels; harbor with piers.

3.3.24 Port Side. The left-hand side of a ship when facing forward. [1405, 2011 2006]

3.3.25 Port State Control. The government authority having ultimate legal jurisdiction over a port or jurisdictional waterways.

3.3.26 Procedure. The series of actions, conducted in an approved manner and sequence, designed to achieve an intended outcome. [1081, 2010]

3.3.27 Requisite Knowledge. Fundamental knowledge one must have in order to perform a specific task. [1001, 2008 2009]

3.3.28 Requisite Skills. The essential skills one must have in order to perform a specific task. [1001, 2013 2002]

3.3.29 Secondary Line. A back-up hose line and crew that accompanies the primary attack line and crew into the hot zone at an incident.

3.3.30 Ship’s Agent. A person or firm who transacts all business in a port on behalf of ship owners or charterers.

3.3.31 Ship’s Engineer. Officer on a mechanically propelled vessel charged with maintenance and efficient operation of main engines and, usually, all powered machinery on board.

3.3.32 Starboard Side. The right-hand side of a ship as one faces forward. [1405, 2011 2006]

3.3.33 Stern. The after end of boat or vessel. [1405, 2011 2006]

3.3.34 Structural Fire Fighting. The activities of rescue, fire suppression, and property conservation in buildings, enclosed structures, aircraft interiors, vehicles, vessels, aircraft, or like properties that are involved in a fire or emergency situation. [1710, 2010 2004]

3.3.35 Task. A specific job behavior or activity. [1002, 2009 2003]

3.3.36 Team. Two or more individuals who have been assigned a common task and are in proximity to and in direct communication with each other, coordinate their activities as a work group, and support the safety of one another.

3.3.37 Trim. (1) The longitudinal angle of a vessel. (2) The relation of the vessel’s floating attitude to the water considered from front to back. (3) The difference between fore and aft draft readings. (4) To cause a vessel to assume a desirable position in the water by arrangement of ballast, cargo, or passengers.

3.3.38 Vessel. The general term for all craft capable of floating on water and larger than a rowboat.

3.3.39 Warm Zone. See 3.3.5.3.

Statement: The Committee changed the text because it no longer needs to define Marine Fire Fighter I and II and believes the other material needs to be reviewed. Reference material dates were updated.
Submitter: Technical Committee Fire Fighter Professional Qualifications  
Recommendation: Revise text to read as follows: 
4.2 Marine Fire Fighter Qualification Requirements. To meet the requirements for Marine Fire Fighter, the individual shall meet the general knowledge and skill requirements and the JPRs of Chapter 5. 

4.2.1* To meet the requirements for Marine Fire Fighter I, the Fire Fighter II shall meet the general knowledge and skill requirements and the JPRs of Chapter 5. 
4.2.2 To meet the requirements for Marine Fire Fighter II, the Marine Fire Fighter I shall meet the general knowledge and skill requirements and the JPRs of Chapter 6. 

Statement: The Committee changed the text because it reflects the proposed design change of the document and consolation of Marine Fire Fighter I and II.
Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Revise and add new text to read as follows:

5.1 General Requirements. To meet the requirements for Marine Fire Fighter I, the Fire Fighter II shall meet the general knowledge requirements in 5.1.1, the general skill requirements in 5.1.2, and the JPRs in Sections 5.2 through 5.5 of this standard and the requirements defined in Chapter 6, Fire Fighter II, of NFPA 1001, Standard for Fire Fighter Professional Qualifications, for municipal fire departments and Chapter 6, Advanced Exterior Industrial Fire Brigade Member, and Chapter 7, Interior Structural Fire Brigade Member, of NFPA 1081, Standard for Industrial Fire Brigade Member Professional Qualifications, for industrial fire departments.

5.1.1 General Knowledge Requirements. The Marine Fire Fighter I shall have general knowledge of the following:

(1) Marine vessel types and potential products to be carried on those vessels.
(2) Marine facility types and potential vessels and products that can be present in those facilities.

5.1.2 General Skill Requirements. This duty shall not involve any requirements for the Marine Fire Fighter I.

5.1.1 Identify marine vessel types and potential products transported, given general information on the vessel types in the local response jurisdiction, awareness level information on products transported by marine vessels, AHJ policies and procedures, and overall scene safety considerations at marine incidents so that the scene of the incident and the hazards are recognized.

(A) Requisite Knowledge. Generalized marine vessel types; awareness level hazardous product information; general hazard classes of product and structural fire-fighting PPE compatibilities; policies and procedures associated with marine incident response.

(B) Requisite Skills. Reading comprehension and oral communication skills.

5.1.2 Define common marine vessel construction and terminology, given vessel construction terminology, marine vessel terminology, and general structural hazards associated with marine vessels so that land-based fire fighters have a working knowledge of general terms when communicating with marine vessel personnel.

(A) Requisite Knowledge. General knowledge of marine vessel construction, marine vessel terminology, structural hazards with marine vessels.

(B) Requisite Skills. Reading comprehension and oral communication skills.

5.1.3 Board a marine vessel, given a vessel, gangway, structural fire-fighting PPE including SCBA, structural fire-fighting hand tools and suppression equipment, and AHJ policies and procedures, so that land-based fire fighters are transferred to the vessel without falling.

(A) Requisite Knowledge. Effect of vessel movement due to tide, wakes, currents, or other factors; effect of water depth; and draft for gangways.

(B) Requisite Skills. Donning structural fire-fighting PPE; carrying tools and equipment in a proper and safe manner; climbing techniques for gangways.

5.1.4 Retrieve a vessel fire control plan and other specified documents from a cold zone on the vessel, given a vessel, an assignment, a fire control plan and other documents, and any necessary equipment, so that the fire control plan and documents are located and brought to the Incident Commander within the time specified by the AHJ.

(A) Requisite Knowledge. Location(s) on the vessel where the fire control plan and other documents, such as dangerous cargo manifests, trim and stability booklets, cargo-loading manuals, and crew and passenger lists are stored; primary and alternative routes to reach the location(s) where the fire control plan and other documents are stored; understanding of response personnel utilization of the fire control plan; location of the command post.

(B) Requisite Skills. Boarding and negotiating or traveling through the vessel; recognition of the fire control plan and other types of documents.

5.1.5 Demonstrate self-survival rescue techniques in water given a body of water and structural fire-fighting PPE including SCBA, so that a land-based fire fighter is able to maintain buoyancy until self-survived or rescued.

(A) Requisite Knowledge. Ability to determine when to doff PPE, water buoyancy; self-sustaining rescue techniques; structural fire-fighting PPE including SCBA; hazards associated with water; hazards leading up to land-based fire fighters falling into water; notification or communication techniques; to indicate rescue is needed.

(B) Requisite Skills. Swimming or floating; self-survival rescue techniques, oral and hand communication skills.
Statement: The Committee changed the text because some port facilities are covered by industrial fire brigades. In addition the Committee changed the text because of conflicts with requirements beyond the fire fighter level.
Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Revise text to read as follows and renumber accordingly:

5.2 Access. This duty involves making safe access to the scene of an incident and evaluating and securing the scene on or around an involved vessel, so that it can be safely boarded, if necessary, according to the JPRs of 5.2.1 through 5.2.3.

5.2.1 Locate and access the scene of an incident, given an incident, pre-incident plans, a facility map, navigational charts, a specified response vehicle, or other aids or combination thereof, used by the AHJ, so that the scene of the incident is identified and potential delays in or hazards to the response are identified and avoided.

(A) Requisite Knowledge. Hazards associated with marine facilities and vessels; vehicle operation regulations within the marine facility; appropriate access points for marine facilities; marine facility layout.

(B) Requisite Skills. Reading and using maps, plans, and navigational charts.

5.2.2 Board a vessel, given a vessel; personal protective equipment; a ladder, gangway, or other access device; and an assignment, so that the hazards are assessed, the access device is positioned and secured according to procedures, and the personnel and equipment necessary to perform the assignment are transferred to the vessel without falling or being dropped.

(A) Requisite Knowledge. Effect of vessel movement due to tide, wakes, currents, or other factors on laddering or accessing a vessel; criteria of a safe foundation for ladder placement on a marine vessel; reliable structural components on the vessel for top placement of a ground ladder; positioning of ladders and gangways; effects of water depth and draft.

(B) Requisite Skills. Climbing techniques for gangways; the ability to carry, raise, and climb ground ladders in a marine environment.

5.2.3 Access a specified location on a vessel, given a vessel, a plan of the vessel, and an assignment, so that hazards are assessed, the location is identified and accessed, and the personnel and equipment necessary to perform the assignment are transferred from the vessel boarding location to the designated location without falling or being dropped.

(A) Requisite Knowledge. Vessel construction terminology; marine terminology (bow, stern, port, starboard, etc.); hazards associated with various locations on a vessel.

(B) Requisite Skills. Negotiating vessel ladders, decks, and corridors; operating vessel doors and hatches.

5.3 Response. This duty involves the placement of apparatus and equipment at an incident, establishing the water supply for fire-fighting operations, rescuing personnel onboard the vessel, establishing effective incident communications, and protecting exposures, and cargo, controlling utilities, and assessing and controlling vessel stability and movement, according to the JPRs of 5.3.1 through 5.3.6.

5.3.1 Position the apparatus at a marine incident, given an incident in a specified location, an assignment, an apparatus, pre-incident plans, a facility map, standard operating procedures, or other resources used by the AHJ, so that hazards are avoided, the apparatus is spotted for the given assignment according to procedures, and access for later arriving vehicles is not unnecessarily blocked.

(A) Requisite Knowledge. Water supply sources for marine incidents; hazards within the port or facility; designated-vehicle access routes within the port or facility; vehicle length, height, and weight limits; safe vehicle placement relative to the vessel and mooring lines; ability to read pre-incident plans and maps of marine facilities; strategic and tactical positioning for various types of fire apparatus.

(B) Requisite Skills. Reading and using maps and plans on marine facilities; recognizing hazards that are present in a marine environment.

5.3.2 Establish connections for the water supply at an incident, given a static or pressurized water supply source; a pumping-type fire apparatus; appropriate hose, adapters; international shore connections, and other fittings; agency procedures; and an assignment, so that an uninterrupted supply of water is established and all hoses are connected and positioned according to procedures.

(A) Requisite Knowledge. International shore connection; location and capacity of hydrants at marine facilities; availability and capabilities of alternative water supply sources such as tanker/tenders, fire boats, and fire pumps; safe-
B. Requisite Skills. Connecting hoses to fire boats and vessel inlets; placing hard intake hoses over dock edges or other drafting locations; stretching supply hoses to the vessel. Ability to recognize and use an international shore connection.

5.3.2 Remove a victim from a vessel as a member of a team, given a vessel, a team, an assignment, a victim, a ladder or gangway, a litter, or other devices specified by the AHJ, so that the equipment is used in its intended manner and the victim is removed without further injury.
(A) Requisite Knowledge. Likely location of crew members, passengers, shipyard workers, and contractors on a vessel or in a marine facility; positioning for ladders and gangways to be used for rescue operations; effects of vessel movements on ladder, aerial device, and gangway placement.
(B) Requisite Skills. Moving conscious and unconscious victims within and off vessels; moving victims on ladders and gangways; moving and positioning ladders and gangways for rescue within and off vessels.

5.3.3 Protect an exposure on board a vessel at a marine fire incident as a member of a team, given an incident; a team; an exposure; a water supply source; fire apparatus, fire hose, nozzles, and equipment; and an assignment, so that the apparatus and equipment are positioned and deployed according to procedures and the exposure is protected.
(A) Requisite Knowledge. Effects of conducted, convected, and radiated heat on marine facility and vessel exposures; Effects of weather on fire behavior and marine exposure protection; exposure hazards presented by various structures and equipment at marine facilities and on vessels; positioning around marine facilities and vessels.
(B) Requisite Skills. Conducting hoses and apparatus to marine facility water supply sources; deploying hoses and nozzles for exposure protection within a marine facility or vessel.

5.3.5 Collect and report vessel stability information, given a vessel, an incident, measuring devices, standard operating procedures, and an assignment, so that any current or potential hazards to stability are recognized and reported according to procedures.
(A) Requisite Knowledge. Effect of tide, wakes/waves, currents, firefighting agents, vessel movement, or combinations thereof on vessel stability; procedures for reporting the information; vessel draft marking systems.
(B) Requisite Skills. Visualizing the position of a vessel and estimating any deviation from the normal position; using measuring devices and communications equipment.

5.3.6 Control vessel movement, given a vessel, mooring equipment, standard operating procedures, and an assignment, so that the vessel is prevented from moving from the desired location.
(A) Requisite Knowledge. Effect of tide, wakes/waves, currents, movement of nearby vessels, weather, or combinations thereof on vessel movement; methods for securing a vessel to a land-based mooring or another vessel; roles and responsibilities for personnel who secure the vessel.
(B) Requisite Skills. Operating mooring lines and equipment.

5.4 Communications. This duty involves using marine facility and vessel communications equipment to receive and relay verbal information at an incident, according to the JPRs of 5.4.1 through 5.4.46.

5.4.1 Transmit and receive messages via marine facility and vessel communications equipment, given marine facility and vessel communications equipment and standard operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ.
(A) Requisite Knowledge. Marine communications terminology and procedures; proper marine radio frequencies to be used; types and capabilities of vessel communications systems; methods for overcoming language barriers.
(B) Requisite Skills. Operating marine facility and vessel communications systems; operating marine radios.

5.4.2 Locate a marine facility or vessel representative, given a marine facility or vessel and an assignment, so that a line of communication is established between the fire department and the facility or vessel representatives.
(A) Requisite Knowledge. Locations on a vessel where the ship's master, mate, engineer, or ship's agent can be located; marine frequencies monitored by the vessel master; locations where facility representatives are normally located; methods for contacting representatives after normal working hours.
(B) Requisite Skills. Operating marine facility and vessel communications equipment; boarding the vessel; negotiating or traveling through the facility or vessel.

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5.4.3 Retrieve a vessel fire control plan and other specified documents from a cold zone on the vessel, given a vessel, an assignment, a fire control plan and other documents, and any necessary equipment, so that the fire control plan and documents are located and brought to the Incident Commander within the time specified by the AHJ.

(A) **Requisite Knowledge.** Location(s) on the vessel where the fire control plan and other documents, such as dangerous cargo manifests, trim and stability booklets, cargo-loading manuals, and crew and passenger lists are stored; primary and alternative routes to reach the location(s) where the fire control plan and other documents are stored; understanding of response personnel utilization of the fire control plan; location of the command post.

(B) **Requisite Skills.** Boarding and negotiating or traveling through the vessel; recognition of the fire control plan and other types of documents.

5.4.4 Transmit and receive messages to vessel personnel and other agencies responding to an incident, given an incident, a list of the other agencies responding to the incident, communications equipment, and standard operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ.

(A) **Requisite Knowledge.** Marine communications terminology and procedures; proper marine radio frequencies to be used; land-based frequencies used in mutual aid situations; other agencies that respond to marine incidents.

(B) **Requisite Skills.** Operating vessel and mobile communications systems, marine radios, and fire department communications equipment.

5.5 Command.

This duty involves an incident management system at an incident, as well as establishing site control and information-exchange procedures, according to the JPRs of 5.5.1 through 5.5.4.

5.5.1 Establish command at an incident, given an incident and an incident management system, so that all major parties involved in the incident and their responsibilities are identified and an initial command post is established.

(A) **Requisite Knowledge.** Working knowledge of the incident management system used by the AHJ; parties to be included in the unified command structure at an incident; unified command procedures; roles and responsibilities of the fire department, ship's master, U.S. Coast Guard or other marine agency for that jurisdiction (e.g., port state control); and facility representatives.

(B) **Requisite Skills.** Locating facility and vessel representatives; conducting unified command meetings, briefings, and operations.

5.5.2 Develop and monitor an initial action plan for an incident, given an incident, standard operating procedures, and fire department communications equipment, so that an accurate size-up of the incident is performed, the nature and location of the incident are accurately reported, hazards are identified, required resources are identified and ordered, assignments to other responders are made, incident progress is monitored, and the information is accurately transferred to the next Incident Commander.

(A) **Requisite Knowledge.** Radio procedures used by the AHJ; resource requirements for various types of incidents; basic marine fire-fighting and emergency incident tactics; hazards associated with marine incidents; incident management system used by the AHJ; size-up procedures; transfer of command procedures.

(B) **Requisite Skills.** Operating marine radio and other communications equipment; using a tactical command worksheet; formulating and transmitting a size-up report.

5.5.3 Control access to a vessel, given a vessel, an incident, an accountability system, an incident management system, and response personnel, so that all emergency responders boarding the vessel are noted and accounted for, unauthorized personnel are prevented from boarding the vessel, and emergency personnel accountability reports (PARs) can be completed.

(A) **Requisite Knowledge.** The incident management and accountability systems used by the AHJ; knowledge of personnel who are authorized to operate at a marine incident.

(B) **Requisite Skills.** Differentiating between authorized and unauthorized personnel attempting to board the vessel, using accountability tactical worksheets.

5.5.4 Evacuate a vessel or exposure, given an occupied vessel or exposure, an incident, an accountability system, an incident management system, and response personnel, so that all nonessential personnel are removed from the hazard area to an area of refuge.

(A) **Requisite Knowledge.** Vessel and facility evacuation procedures; likely locations of passengers and crew members on the vessel; incident management and accountability procedures used by the AHJ.

(B) **Requisite Skills.** Operating onboard communications equipment; identifying safe routes of egress and locations of
safe refuge on a vessel. Controlling, directing and moving passengers and crew.

Statement: The Committee is revising the document to reorganize the qualifications for marine fire fighter.

1005- Log #FR15 PQU-FFQ
(6.1, 6.2)

Final Action:

Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Revise to read as follows:

6.1 General Requirements.
To meet the requirements for Marine Fire Fighter II, the Marine Fire Fighter I shall meet the general knowledge requirements in 5.1.1, the general skill requirements in 5.1.2, and the JPRs in Sections 5.2 through 5.5.

6.1.1 General Knowledge Requirements.
The Marine Fire Fighter II shall have general knowledge of the following:
(1) Stability characteristics of various types of vessels
(2) Relationship of stability to trim, list, hull deflection, and draft

6.1.2 General Skill Requirements.
(Reserved)

6.2 Access.
This duty involves making safe access to the scene of an incident and evaluating and securing the scene on or around an involved vessel so that it can be safely boarded, if necessary, according to the JPRs of 6.2.1.

6.2.1 Access a fire compartment operating as a member of a team, given a vessel, a team, an assignment, an incident, personal protective equipment, forcible entry tools, and a guide rope or hose line, so that team integrity is maintained, doors and hatches are opened, tools are used, barriers are removed, and the opening is made ready for entry.

(A) Requisite Knowledge.
Construction and normal operation of vessel doors and hatches; forcible entry techniques for vessel doors, hatches, and compartments; safety procedures for securing vessel doors and hatches to prevent them from closing behind fire fighters; desired entry methods for various tactical operations, including ventilation, observation, dewatering, and agent application;

(B) Requisite Skills.
Transporting and operating forcible entry tools; operating, forcing, and securing vessel doors and hatches; breaching decks and walls.

Statement: The Committee is revising the document to reorganize the qualifications for Marine Fire Fighter.

1005- Log #FR16 PQU-FFQ
(6.3.1)

Final Action:

Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Delete text:

6.3.1 Control marine facility utilities, given a vessel or marine facility, an incident, standard operating procedures, tools, and an assignment, so that the utilities are controlled and command is notified.

(A) Requisite Knowledge.
Properties, principles, and safety concerns for electric, gas, sanitary, and water systems of marine facilities; utility disconnection methods and safety precautions specific to marine facilities.

(B) Requisite Skills.
Identifying and operating utility controls found at marine facilities and on vessels; assessing the marine facility for utility hazards.

Statement: The Committee is revising the document to reorganize the qualifications for Marine Fire Fighter.
Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Delete text:

6.3.2*—Control cargo transfer to and from a vessel, given a vessel, cargo, equipment, standard operating procedures, and an assignment, so that the cargo transfer status is identified, hazards to fire-fighting operations are recognized and mitigated, and the information is relayed to the Incident Commander.

(A) — Requisite Knowledge: Hazards presented by various types of cargo, cargo-handling equipment; procedures for securing and transferring various types of cargo; vessel and facility personnel roles and responsibilities.

(B) — Requisite Skills: Using various types of cargo-handling equipment.

Statement: The Committee changed the text because cargo handling/transfer is a high hazard activity and requires the operation of specialized equipment. It is not reasonable to expect a land-based Marine Firefighter II to receive the type of training necessary to operate this equipment.
Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Revise text to read as follows:

6.3.3 Advance hose lines for boundary protection and other defensive fire operations onboard a vessel operating as a member of a team, given a vessel, a team, an incident, an assignment, personal protective equipment, sufficient hose and a nozzle, standard operating procedures, and other equipment necessary to access the intended deployment location, so that team integrity is maintained, the hose line is deployed for advancement and operation, effective agent application practices are used, techniques are appropriate for the type of fire being fought, hazards are recognized and avoided, and the fire is brought under control or the boundary is sufficiently cooled.

(A) Requisite Knowledge. Principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions to be followed when advancing hose lines to a fire on a vessel; observable results of a fire stream that has been applied; dangerous vessel conditions created by fire; principles of exposure protection on a vessel; physical states of matter that fuels can be found on a vessel; types and application of attack lines used on vessels; effects of fire streams on various material/fuel configurations; safe locations for operating fire streams on a vessel; recognition of the need to control fire movement aboard a vessel; characteristics and operation of vessel fixed water supply and fire protection systems.

(B) Requisite Skills. Preventing water hammers when shutting down nozzles and valves; opening, closing, and adjusting flow and stream pattern on spray nozzles; advancing charged and uncharged 1½ in. (38 mm) diameter or larger hose lines up and down vessel ladders and stairs, through corridors, and across decks; applying the fire stream to the marine fire area; opening and securing watertight doors and hatches and other doors and hatches onboard a vessel.

6.3.4 Ventilate smoke from a vessel operating as part of a team, given a vessel, a team, an incident, an assignment, personal protective equipment, ventilation tools, equipment, ladders, standard operating procedures, and onboard ventilation systems, so that all equipment is positioned for ventilation, team integrity is maintained, a specified ventilation opening is created and left unobstructed, tools and onboard ventilation equipment are used as designed, all possible ventilation barriers are removed, products of combustion are removed from the vessel, and the team retreats to a safe location once the ventilation opening is made.

(A) Requisite Knowledge. Construction principles of a vessel that affect ventilation operations; principles, advantages, limitations, and effects of horizontal, vertical, natural, and forced ventilation; safety considerations when venting a vessel; operation of onboard ventilation systems; signs, causes, effects, and prevention of backdrafts; products of combustion commonly found in vessel fires; methods of heat transfer and principles of thermal layering on vessels; effects of vessel construction on fire behavior and heat transfer.

(B) Requisite Skills. Transporting and deploying ventilation equipment on a vessel; opening marine doors and hatches; breaching vessel structural components; operating onboard ventilation systems.

Statement: The Committee changed the text because breaching vessel structural components is a high hazard activity and varies widely from vessel to vessel. Any breach to larger vessels should include the vessel crew to ensure appropriate safety concerns are addressed. Additionally, onboard ventilation systems should be operated by the crew of the ship. Additionally, the Committee is revising the document to reorganize the qualifications for marine fire fighter.
Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Revise text to read as follows:

6.3.5 - Operate onboard vessel fixed fire suppression systems as a member of a team, given a vessel, a team, an incident, a fixed fire suppression system, an assignment, personal protective equipment, standard operating procedures, and communications equipment, so that the system is activated or shut down when directed by the Incident Commander.

(A) Requisite Knowledge. Types of fixed suppression systems found on vessels, appropriate times to activate fixed suppression systems on vessels, hazards associated with operating fixed suppression systems and agents.

(B) Requisite Skills. Operating fire suppression system controls; operating communications equipment located at the fire suppression system control room.

6.3.5 6.1.2 Identify the dangers associated with entering a space in which a fixed fire system has discharged given a vessel, a specified fixed system that has been activated, an assignment, communications, PPE, and a team.

(A) Requisite Knowledge. Various types of fixed fire suppression systems found on board vessels calling in the response area and the dangers associated with each type.

(B) Requisite Skill. Gaining or denying entry based upon the type of fixed fire suppression system involved.

Statement: The Committee changed the text because the original JPR is not a responsibility of a Marine Fire Fighter II.
6.1.3

Attack a fire within a vessel operating as a member of a team, given a vessel, a team, an incident, an assignment, a hazardous material, and personal protective equipment, so that team integrity is maintained, attack techniques facilitate suppression given the level of the fire, hidden fires are located and extinguished when needed, and hazards are recognized and managed, and the fire is extinguished.

(A) Requisite Knowledge. Principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions Precautions to be followed when advancing hose lines to a fire on a vessel;

(B) Requisite Skills. Deploying and operating dewatering equipment.

6.1.5

Methods for removing or transferring water; safety precautions that must be taken when working in water; hazards associated with water collecting in various portions of a vessel; hazards associated with water removal or transfer in a vessel.

(A) Requisite Knowledge. Methods for removing or transferring water; safety precautions to be taken when working in water; hazards associated with water collecting in various portions of a vessel;

(B) Requisite Skills. Deploying and operating dewatering equipment.

6.1.7

Interpret marine facility and vessel documents, given a vessel fire control plan, passenger and cargo manifests, shipping papers, stowage plan, and appropriate reference materials, so that the exposures, hazards, or hazardous materials are identified and the information is conveyed to the Incident Commander.

(A) Requisite Knowledge. Terminology and symbols used in fire control plans; use of and difference between vessel arrangement diagrams and fire control plans; purpose of watch station bills and crew/passenger lists and how they can be used by response personnel in an emergency; location, use, and limitations of a Dangerous Cargo Manifest DCM and a cargo stowage plan; location where these documents are likely to be found and who will utilize them in an emergency; implications of changes in vessel draft, trim, list, and hull deflection; container numbering systems; placarding and labeling systems; ship layout and construction.

(B) Requisite Skills. Locating specific items on fire control plans, such as fire control lockers, agent storage rooms, and fire main connections; using the fire control plan to develop the rescue plan; reading information on a DCM, including hazardous material shipping name, package type, weight, location, hazard class, and UN number.

6.1.9

Confirm the location and identity of exposures, hazards, or hazardous materials from vessel documents or personnel as a member of a team given a vessel, a team, an assignment, crew members, an incident, a dangerous cargo manifest (DCM), shipping papers, stowage plan, and appropriate reference materials, so that the exposures, hazards, or hazardous materials are identified and the information is conveyed to the Incident Commander.

(A) Requisite Knowledge. Fire behavior onboard vessels; safety procedures for operating in or near fire compartments on vessels; vessel construction and arrangement.

(B) Requisite Skills. Negotiating vessel ladders, stairs, corridors, and decks; operating in high heat and vision-obscured areas; accurately estimating compartment and fire size and percentage of involvement.

6.2.7

Remove water from, or transfer water within, a vessel.

(A) Requisite Knowledge. Methods for removing or transferring water; safety precautions to be taken when working in water; hazards associated with water collecting in various portions of a vessel; hazards associated with water removal or transfer in a vessel.

(B) Requisite Skills. Deploying and operating dewatering equipment.

6.2.8

Locate specific items on fire control plans, such as fire control lockers, agent storage rooms, and fire main connections; using the fire control plan to develop the rescue plan; reading information on a DCM, including hazardous material shipping name, package type, weight, location, hazard class, and UN number.

(A) Requisite Knowledge. Terminology and symbols used in fire control plans; use of and difference between vessel arrangement diagrams and fire control plans; purpose of watch station bills and crew/passenger lists and how they can be used by response personnel in an emergency; location, use, and limitations of a Dangerous Cargo Manifest DCM and a cargo stowage plan; location where these documents are likely to be found and who will utilize them in an emergency; implications of changes in vessel draft, trim, list, and hull deflection; container numbering systems; placarding and labeling systems; ship layout and construction.

(B) Requisite Skills. Locating specific items on fire control plans, such as fire control lockers, agent storage rooms, and fire main connections; using the fire control plan to develop the rescue plan; reading information on a DCM, including hazardous material shipping name, package type, weight, location, hazard class, and UN number.

6.2.9

Assess fire conditions onboard a vessel while operating as a member of a team, given a vessel, a team, an incident, personal protective equipment, a hose or safety line, and communications equipment, so that team integrity is maintained and the current size, intensity, location, rate and direction of spread, and other pertinent fire information are relayed to the Incident Commander within the time frame and format established by the AHJ.

(A) Requisite Knowledge. Fire behavior onboard vessels; safety procedures for operating in or near fire compartments on vessels; vessel construction and arrangement.

(B) Requisite Skills. Negotiating vessel ladders, stairs, corridors, and decks; operating in high heat and vision-obscured areas; accurately estimating compartment and fire size and percentage of involvement.

6.2.10

Confirm the location and identity of exposures, hazards, or hazardous materials from vessel documents or personnel as a member of a team given a vessel, a team, an assignment, crew members, an incident, a dangerous cargo manifest (DCM), shipping papers, stowage plan, and appropriate reference materials, so that the exposures, hazards, or hazardous materials are identified and the information is conveyed to the Incident Commander.

(A) Requisite Knowledge. Fire behavior onboard vessels; safety procedures for operating in or near fire compartments on vessels; vessel construction and arrangement.

(B) Requisite Skills. Negotiating vessel ladders, stairs, corridors, and decks; operating in high heat and vision-obscured areas; accurately estimating compartment and fire size and percentage of involvement.

6.2.11

Interpret marine facility and vessel documents, given a vessel fire control plan, passenger and cargo manifests, crew information or other types of documents, communications equipment, and appropriate reference materials, so that the information is interpreted and conveyed to the Incident Commander.

(A) Requisite Knowledge. Terminology and symbols used in fire control plans; use of and difference between vessel arrangement diagrams and fire control plans; purpose of watch station bills and crew/passenger lists and how they can be used by response personnel in an emergency; location, use, and limitations of a Dangerous Cargo Manifest DCM and a cargo stowage plan; location where these documents are likely to be found and who will utilize them in an emergency; implications of changes in vessel draft, trim, list, and hull deflection; container numbering systems; placarding and labeling systems; ship layout and construction.

(B) Requisite Skills. Locating specific items on fire control plans, such as fire control lockers, agent storage rooms, and fire main connections; using the fire control plan to develop the rescue plan; reading information on a DCM, including hazardous material shipping name, package type, weight, location, hazard class, and UN number.

6.2.12

Locate specific items on fire control plans, such as fire control lockers, agent storage rooms, and fire main connections; using the fire control plan to develop the rescue plan; reading information on a DCM, including hazardous material shipping name, package type, weight, location, hazard class, and UN number.

(A) Requisite Knowledge. Terminology and symbols used in fire control plans; use of and difference between vessel arrangement diagrams and fire control plans; purpose of watch station bills and crew/passenger lists and how they can be used by response personnel in an emergency; location, use, and limitations of a Dangerous Cargo Manifest DCM and a cargo stowage plan; location where these documents are likely to be found and who will utilize them in an emergency; implications of changes in vessel draft, trim, list, and hull deflection; container numbering systems; placarding and labeling systems; ship layout and construction.

(B) Requisite Skills. Locating specific items on fire control plans, such as fire control lockers, agent storage rooms, and fire main connections; using the fire control plan to develop the rescue plan; reading information on a DCM, including hazardous material shipping name, package type, weight, location, hazard class, and UN number.

6.3.1

Recommendation: Revise text to read as follows:

6.3.6 6.3.11

1005- Log #FR18 PQU-FFQ

Final Action:

Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Revise text to read as follows:

6.3.6

Assess fire Monitor fire conditions onboard a vessel while operating as a member of a team, given a vessel, a team, an assignment, an incident, personal protective equipment, a hose or safety line, and communications equipment, so that team integrity is maintained and the current size, intensity, location, rate and direction of spread, and other pertinent fire information are relayed to the Incident Commander within the time frame and format established by the AHJ.

(A) Requisite Knowledge. Fire behavior onboard vessels; safety procedures for operating in or near fire compartments on vessels; vessel construction and arrangement.

(B) Requisite Skills. Negotiating vessel ladders, stairs, corridors, and decks; operating in high heat and vision-obscured areas; accurately estimating compartment and fire size and percentage of involvement.
observable results of a fire stream that has been applied; dangerous vessel conditions created by fire; principles of exposure protection on a vessel; types of fuels found on a vessel; types and application of attack lines used on vessels; effects of fire streams on various material/fuel configurations; safe locations for operating fire streams on a vessel—recognition of the need to control fire movement aboard a vessel.

(B) Requisite Skills. Preventing water hammers when shutting down nozzles and valves; opening, closing, and adjusting flow and stream pattern on spray nozzles; advancing charged and uncharged 1½ in. (38 mm) diameter or larger hose lines up and down vessel ladders and stairs, through corridors, and across decks; applying the fire stream to the marine fire area; attacking fires on, above, and below the main deck level; advancing multiple hose lines for fire attack, secondary lines in coordination, or both.

6.3.11* Conduct a search and rescue operation for a missing or downed fire fighter on a vessel operating as a member of a team, given a vessel, a team, an assignment, an incident, standard operating procedures, a vessel fire plan or other documents, a downed or missing fire fighter, personal protective equipment, a flashlight, a portable radio, forcible entry tools, a hose or safety line, and other equipment available to the AHJ, so that ladders are placed when needed; all equipment is used as designed; areas where the fire fighter could be located are searched; the fire fighter is located, supported, and removed; team integrity is maintained; and the team members’ respiratory protection is not compromised.

(A) Requisite Knowledge. Psychological effects of operating in obscured-vision conditions; methods to determine if the area is tenable; rapid intervention search techniques and strategies for locating and removing downed or missing fire fighters.

(B) Requisite Skills. Using forcible entry tools and ladders during search and rescue operations; using self-contained breathing apparatus (SCBA) while negotiating restricted passages; setting up and using ladders for various rescue situations; rescuing a fire fighter with functioning respiratory protection; rescuing a fire fighter without functioning respiratory protection; accessing remote or enclosed compartments; advancing charged and uncharged 1¼ in. (38 mm) diameter or larger hose lines up and down vessel ladders and stairs, through corridors, and across decks; removing fire fighters using carries and drags; operating, forcing, and securing vessel doors and hatches; breaching decks and walls.

Statement: The Committee is revising the document to reorganize the qualifications for Marine Fire Fighter.

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1005- Log #FR19 PQU-FFQ

Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Revise text to read as follows:

6.3.12  6.1.8* Conduct a search and rescue operation for a missing victim on a vessel operating as a member of a team, given a vessel, a team, an assignment, an incident, a vessel fire plan or other documents, a missing victim, personal protective equipment, a flashlight, forcible entry tools, and other equipment available to the AHJ, so that ladders are placed where needed, all equipment is used as designed, areas where the victim could be located are searched, the victim is located and removed, team integrity is maintained, and the team members’ respiratory protection is not compromised.

(A) Requisite Knowledge. Psychological effects of operating in obscured-vision conditions; methods to determine if the area is tenable; primary and secondary search techniques on vessels; victim removal methods (including various drags and carries); likely locations of passengers, crew members, shipyard workers, and contractors.

(B) Requisite Skills. Using forcible entry tools and ladders during search and rescue operations; using SCBA while negotiating restricted passages; setting up and using ladders for various rescue situations; rescuing victims without functioning respiratory protection; accessing remote or enclosed compartments; advancing charged and uncharged 1½ in. (38 mm) diameter or larger hose lines up and down vessel ladders and stairs, through corridors, and across decks; removing victims using carries and drags; operating, forcing, and securing vessel doors and hatches. breaching decks and walls.

Statement: The Committee changed the text because breaching vessel structural components is a high hazard activity and varies widely from vessel to vessel. Any breach to larger vessel should include the vessel crew to ensure appropriate safety concerns are addressed.
1005- Log #FR10 PQU-FFQ

Final Action:

Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Revise text to read as follows:

Determine the need for deploying special extinguishing agents needed to attack a fire on a vessel, given a vessel, an incident, an assignment, a selection of special extinguishing agents and their use instructions, special agent application equipment, agent quantity calculation devices, and other information allowed by the AHJ, so that the need is identified and communicated to the Incident Commander, the agent is selected for the fire being attacked, the equipment needed to apply the agent is requested and assembled, and a sufficient quantity of agent is applied to extinguish the fire and prevent re-ignition.

(A) Requisite Knowledge. Classes of fire and the appropriate extinguishing agents for each class and fuel; effects of various extinguishing agents on cargo and life safety; delivery methods for hazards associated with various special extinguishing agents, including onboard systems; sources of bulk special extinguishing agents.

(B) Requisite Skills. Reading cargo manifests; reading technical information on extinguishing agents; calculating extinguishing rates and quantities for various special agents; deploying and operating special extinguishing agent equipment.

Statement: The Committee changed the text because maritime personnel will determine the quantities and delivery methods.

1005- Log #FR9 PQU-FFQ

Final Action:

Submitter: Technical Committee Fire Fighter Professional Qualifications

Recommendation: Delete text:

Develop a preincident survey for a vessel, given a vessel, measuring and documentation equipment, and a policy for conducting a preincident survey by the AHJ, so that a detailed preincident survey is developed in accordance with the standard operating procedures of the AHJ.

Statement: The Committee changed the text because marine facilities have a significant amount of vessel traffic. Traffic can include wide variety of vessel types and sizes. Many fire departments struggle to maintain staffing to perform pre-incident plans for permanent structures, and the challenge with preplanning the volume of transient vessel traffic is insurmountable for most maritime communities.
Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Delete text:

(A.4.2.1) Many jurisdictions choose to deliver training in modules that allow personnel to be trained in certain fire fighter tasks and to perform limited duties under direct supervision prior to meeting the complete requirements for Marine Fire Fighter I certification.

Statement: The Committee deleted the text because Annex material is no longer needed.

Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Delete text:

(A.6.3.2) Local standard operating procedures identifying who might operate cargo-handling equipment should be established and followed. The standard operating procedures might choose to differentiate these responsibilities based on the size of the vessel. Fire fighters might be allowed to operate cargo-handling equipment for small vessels, while cargo-handling on large vessels might be left up to longshoremen and vessel crew members.

Statement: The Committee changed the text because cargo handling/transfer is a high hazard activity and requires the operation of specialized equipment. It is not reasonable to expect a land-based Marine Firefighter II to receive the type of training necessary to operate this equipment. Refer to FR #3.

Submitter: Technical Committee Fire Fighter Professional Qualifications
Recommendation: Delete text:

(A.6.3.5) If this activity requires the Marine Fire Fighter II to enter an IDLH atmosphere, it should be performed by a team. It is imperative that the operation of fixed fire suppression systems be coordinated with the operation and advancement of crews for manual fire-fighting operations; otherwise, operating the system might pose additional challenges or hazards to fire fighters located in the area in which the system is operating.

Statement: The Committee deleted the text because Annex material is no longer needed.