NAVSEA
STANDARD ITEM

FY-15 (CH-1)

ITEM NO: 009-08
DATE: ***10 JUN 2014***
CATEGORY: I

1. SCOPE:

1.1 Title: Fire Protection at Contractor's Facility; accomplish

2. REFERENCES:

2.1 NFPA Standard 312, Standard for Fire Protection of Vessels During Construction, ***Conversion,*** Repair, and Lay-up

2.2 NFPA Standard 1962, Standard for the Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles

2.3 29 CFR Part 1915, Occupational Safety and Health Standards for Shipyard Employment

3. REQUIREMENTS:

3.1 Provide fire protection in accordance with the requirements of 2.1 through 2.3 and this item.

3.2 Primary fire protection equipment shall consist of:

3.2.1 Fire pumps capable of providing the gallons per minute (GPM) flow specified in Attachment A at 100 PSIG with 2-1/2 inch fire hoses to ensure that GPM flow in Attachment A is uninterrupted for the entire availability. Flow and pressure shall be measured at the connection point to the ship's fire main.

3.2.1.1 Verify by the Pitot tube method or an in-line flow meter that the water supply specified in Attachment A is available. Water flow tests shall be accomplished prior to availability start date, each time the vessel shifts berths, and annually thereafter should the contract extend beyond one year.

3.2.2 Lighting provided for the ship/berthing barges topside area in the vicinity of each gangway. The term "ship" as used herein is synonymous with, and has the same definition as the term "vessel" as defined in 2.3.

3.2.3 Install a fire alarm system on the quarterdeck as designated by the SUPERVISOR, arranged to send a signal directly to a central station

service, a remote station service, a cognizant fire department, a shipyard fire department, or a continuously manned location within the shipyard where trained operators can take immediate action to transmit an alarm.

3.2.3.1 Test the fire alarm system daily to ensure its reliability. Repair or replace defective or inoperative alarms immediately.

3.2.3.2 Fire alarm devices placed aboard ship shall be either a fire alarm pull box or a non-dial telephone.

3.2.3.3 In addition, place a telephone on the quarterdeck as an alternate means of calling the cognizant fire department, shipyard fire department, or a continuously manned location within the shipyard where trained operators can take immediate action to transmit an alarm.

3.2.4 When a ship is in dry dock, place a means of reporting a fire at least every 100 feet on the dry dock floor under the length of the ship so that personnel working under the ship can quickly report. If 2 ships are dry-docked side by side, they may share the means of reporting if accessible between the 2 ships.

3.3 When the ship's fire main is out of service, temporary primary fire protection shall consist of:

3.3.1 Fire pumps capable of providing the gallons per minute (GPM) flow specified in Attachment A at 100 PSIG with 2-1/2 inch hoses to ensure that GPM flow in Attachment A is uninterrupted for the entire availability. Flow and pressure shall be measured at the connection point to the temporary hose valve manifold stations.

3.3.2 Two and one-half inch fire hose and hose valve manifolds ***with a minimum of 3-valved outlets*** on the vessel and dry dock or marine railway so that all parts of the vessel and dry dock or marine railway can be reached by at least 2, one and one-half inch or one and three-quarter inch 100-foot hoses. The 100-foot hoses shall be pre-connected and faked on racks nearby.

3.3.3 The components of the temporary primary firefighting system shall be inventoried and inspected prior to flooding the dock. Provide a copy of the inventory list and inspection results to the SUPERVISOR upon request.

3.3.4 Conduct final inspection and flow test of the temporary primary fire protection systems required in 3.3.1 and 3.3.2 prior to the ship’s firefighting systems or equipment being disabled.

3.4 Emergency fire protection equipment, in addition to that required by 3.2 or 3.3, shall consist of:

3.4.1 Fire pumps capable of providing 500 GPM at 100 PSIG to hose valve manifolds located on the vessel. Flow and pressure shall be measured at the manifolds.

3.4.2 Two and one-half inch fire hoses and hose valve manifolds ***with a minimum of 3-valved outlets*** on the vessel and dry dock or marine railway so that all parts of the vessel and dry dock or marine railway can be reached by at least 2, one and one-half inch or one and three-quarter inch 100 foot hoses. The 100 foot hoses and nozzles shall be pre-connected and faked on racks nearby.

3.4.2.1 The manifold stations shall be clearly identified, with sources of water and operating instructions.

3.4.2.2 Emergency fire protection shall be provided in the areas prior to placing any fire main section out of commission.

3.4.3 Water supply shall be available within 3 minutes of loss of primary source of fire main flow/pressure.

3.4.4 Emergency lighting and power, other than existing ship's emergency backup, shall be available for emergency lighting throughout the ship/barge and emergency devices using a separate source of energy or power line.

3.4.5 The components of the emergency fire protection equipment shall be inventoried and inspected prior to flooding the dock. Provide a copy of the inventory list and inspection results to the SUPERVISOR upon request.

3.4.6 Conduct final inspection and flow test of the emergency fire protection equipment required in 3.4.1 and 3.4.2 prior to the ship’s firefighting systems or equipment being disabled.

3.5 Primary, temporary primary, and emergency fire protection equipment shall consist of:

3.5.1 Fire hoses equipped with one and one-half inch combination straight stream and spray pattern nozzle. Charged hoses shall have recirculation capability which will prevent freezing of water in each hose.

3.5.2 Fire hoses shall be inspected and service-tested in accordance with 2.2 within 90 days before being placed in service for the first time and at least annually thereafter.

3.5.3 Where temporary fire mains are necessary, they shall be equipped with a minimum of 2 isolation valves between shore supply feeders. Additional isolation valves shall be placed in the remainder of the fire main loop so that the maximum distance between any 2 adjoining valves does not exceed 200 feet. Where water supply to lowermost compartments is provided through fire hoses dropped to hose manifolds, those fire hoses shall be valved at the source of supply and the fire hoses unpressurized to preclude inadvertent flooding. Pressure gages shall be installed in reasonable

strategic locations along the temporary main to allow personnel to clearly read gage-face during temporary system operation.

3.5.4 Where fire hose coverage cannot be provided by using the ship's installed fire plugs supplied from the ship's permanent firemain or a temporary firemain piping system, hose manifolds shall be located on the weather deck, hangar deck, or on any lower deck where flooding due to a ruptured hose could be tolerated. Water supply to hose valve manifolds shall be 2 and one-half to 4 inch jumper hoses from pier outlets. Hose valve manifolds shall be provided in sufficient numbers such that all parts of the ship, including the interior of temporary structures, can be reached by at least 2, 100 foot hoses.

3.5.5 Where coverage of the lowermost compartments is impossible with 100 feet of hose, unpressurized 2 and one-half inch drop lines, supplied from the manifolds, with 2 and one-half inch by one and one-half inch by one and one-half inch wye-gate fittings shall be rigged to the lowermost compartments. One and one-half inch hoses and nozzles shall be pre-connected and faked on adjacent racks. Activating instructions shall be posted by the manifold.

3.5.***6*** Portable communication devices shall be provided for use during firefighting operations between site and fire and contractor's key control center.

3.5.***7*** ***Temporary*** lighting devices shall be in place to assist in firefighting operation when normal and emergency shipboard power fails.

3.5.***8*** Emergency backup support equipment (crane, forklift, trucks, pumps) to assist in securing or providing temporary services shall be provided.

3.5.***9*** Dewatering equipment (100 GPM minimum).

3.5.***10*** Portable fire pumps capable of a total of 500 GPM at 100 PSIG on board ship during berth shifts, including transits to and from dry dock, when ship's system cannot be used.

3.5.***11*** Install gages at connection to the ship's fire main and on all temporary and emergency fire main manifolds, and ensure that 100 PSIG is maintained at each gage uninterrupted for the entire availability. ***Gages shall be calibrated and in proper working order.***

3.6 Maintain available for review, prior to commencement of work, a fire safety and fire response plan meeting the requirements of 2.3. In addition to the requirements of 2.3, the plan shall identify:

3.6.1 The integrated fire protection system which will be in effect during the performance of the Job Order.

3.6.2 Total fire prevention program used, along with the types and frequency of tests of equipment and devices.

3.6.3 Detailed communication links (telephones, drop boxes, alarms, horns) location, testing interval, and their interface with municipal systems.

3.6.4 Normal and emergency sources of electric power, firefighting water and lighting, testing interval, and their interface with municipal systems.

3.6.5 The location of all the normal and emergency backup support equipment to be used in support when combating a fire, and the equipment's testing cycle.

3.6.6 The shipyard organization to be used and their:

3.6.6.1 Designation and responsibility for all shifts

3.6.6.2 Training

3.6.6.3 Anticipated response times

3.6.6.4 Interface with municipal units

3.6.7 The general procedures directing contractor employees on:

3.6.7.1 Fire reporting

3.6.7.2 Fire responses

3.6.7.3 Firefighting actions

3.6.7.4 Prolonged firefighting responsibilities

3.6.8 The frequency testing cycle of the fire protection system.

3.7 The requirements of 3.6.7.1 shall be posted on the quarterdeck.

3.8 Ensure access to temporary and Ship’s Force firefighting equipment is not obstructed or restricted.

3.9 Brief Ship’s Force personnel on the procedures to rapidly secure temporary systems (e.g., air, electrical power, and ventilation) under their control.

4. NOTES:

4.1 None.

ATTACHMENT A
FIRE PROTECTION WATER SUPPLY REQUIREMENTS

SHIP TYPE		FLOW (GPM) *
AD	Destroyer Tender	1,500
ADG	Degaussing Ship	500
AE	Ammunition Ship	1,500
AF	Store Ship	1,500
AFS	Combat Store Ship	1,500
AG	Miscellaneous Auxiliary Ship	1,500
AGEH	Hydrofoil Research Ship	500
AGF	Miscellaneous Flagship	2,000
AGFF	Frigate Research Ship	1,000
AGM	Missile Range Instrumentation Ship	1,500
AGMR	Major Communications Relay Ship	1,500
AGOR	Oceanographic Research Ship	500
AGP	Gunboat Support Ship	2,000
AGS	Surveying Ship	1,000
AH	Hospital Ship	1,000
AK	Cargo Ship	1,500
AKS	Store Issue Ship	1,500
AKR	Vehicle Cargo Ship	1,500
ANL	Net Laying Ship	500
AO	Oiler	1,500
AOE	Fast Combat Support Ship	1,500
AOG	Gasoline Tanker	1,000
AOR	Fleet Replenishment Oiler	1,500
AP	Transport Ship	1,000
APB	Self-propelled Barracks Ship	500
AR	Repair Ship	1,500
ARB	Battle Damage Repair Ship	500
ARC	Cable Repair and Laying Ship	1,000
ARG	Internal Combustion Engine Repair Ship	1,500
ARL	Landing Craft Repair Ship	1,000
ARS	Salvage Ship	500
ARSD	Salvage Lifting Ship	500
ARST	Salvage Tender	1,000
ARVA	Aircraft Repair Ship	1,000
ARVE	Aircraft Engine Ship	1,000
ARVH	Helicopter Tender	1,500
AS	Submarine Tender	1,500
ASR	Submarine Rescue Ship	600
ATA	Ocean Tug	500
ATF	Ocean Tug Fleet	500
ATS	Salvage and Rescue Tug	500
AVM	Guided Missile Ship	1,500
CV, CVN	Aircraft Carrier	3,000
CG	Guided Missile Cruiser	1,000

ATTACHMENT A
FIRE PROTECTION WATER SUPPLY REQUIREMENTS (Con't)

SHIP TYPE		FLOW (GPM) *	
DDG	Guided Missile Destroyer	1,000	
FFG	Guided Missile Frigate	1,000	
IX	Unclassified Miscellaneous	1,500	
LCC	Amphibious Command Ship	1,000	
LCS	Littoral Combat Ship	1,000	
LHA	Amphibious Assault Ship	2,500	**
LHD	Amphibious Assault Ship	2,500	
LKA	Amphibious Cargo Ship	1,500	
LPD	Amphibious Transport Dock	1,500	***
LSD	Landing Ship Dock	2,000	***
YRB	Repair and Berthing Barge	500	
YRBM	Repair, Berthing and Messing Barge	500	
YRBL	Repair, Berthing and Messing Barge (large)	500	
LST	Landing Ship Tank	1,500	***
MCM	Mine Counter Measures Ship	750	
PC	Patrol Coastal	500	
PCH	Hydrofoil Patrol Craft	500	
PG	Patrol Combatants	500	
PGH	Hydrofoil Gunboat	500	

* All flows are from the pier or dry dock outlet and are available at adequate residual pressures from those systems in compliance with present design criteria for dry docks and piers as reflected in NAVFAC design manuals (UFC 4-213-10, UFC 4-213-12, UFC 4-150-01, UFC 4-150-02, and UFC 4-150-06).

** Includes supply to operate 2 hangar sprinkler groups and 2, 2-1/2-inch hoselines.

*** Includes supply to operate one sprinkler group and 2, 2-1/2-inch hoses.