

33. FIRE PREVENTION

**Colonna's Shipyard, Inc.
Colonna's Down River
Steel America**

29 CFR 1915.500

FIRE PROTECTION IN SHIPYARD EMPLOYMENT

FIRE PROTECTION PLAN

REVISION 6 EFFECTIVE 9/9/19

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REVISION HISTORY

Date	Revised	By
12/4/04	Original	F. Wheatley
	Added under control of hazards that only CSI Marine Chemist will be used.	F. Wheatley per CEO
11/5/08	Changed of Safety Manager	J. Nicastro
12/17/08	Removed names of individuals. Added NOTE: to 502.A for off site work. Added Rev. History Page.	F. Wheatley per CEO
8/31/2011	Various updates including procedures for West yard.	Jimmy Nicastro
5/1/2012	Added attachment number 4 in the procedure to match the table of contents.	Fred Pinkney
5/25/12 Rev 5	Added new personnel change for A and C shifts at station 8 fire dept.	J. Nicastro
5/25/12 Rev 5	Added equipment list to attachment 3	J. Nicastro
8/27/12	Redefined Designated/non-Designated areas. Rearranged definitions. Update Evacuation Muster Areas	F.T. Wheatley
8/22/2013 Rev. 6	Review	Jimmy Nicastro
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11/15/2017	TSDO MARMC 757-400-0000	Jimmy Nicastro
6/29/2018	Updated Attachment 1 – Muster locations.	J. Yoakem
6/17/2020	Added Attachment 5 – CP 80HR OJT Sheet	J. Yoakem

1915.501 General Provisions

- a) Purpose – To provide protection of employees from fire hazards associated in shipyard employment.
- b) Scope – All employees working within the facility boundaries including assigned subcontractors.
- c) Employee Participation – Employees are encouraged to review and make suggestions on how the plan can be improved or modified. These suggestions should be forwarded to the Safety Department in writing for review.
- d) Multi-Employer Worksites responsibilities.

1. Host employer responsibilities:

- i. Employees will be notified about the plan's content during orientation and requirements to comply with the regulations as written.
- ii. Ensure responsibilities are properly assigned to all employers working in the facility.
- iii. Where multiple clients exist, i.e. vessel owners and their subcontractors, they will be required to comply with the plans contents.

2. Employer/Subcontractor responsibilities:

- i. Ensure the facility is aware of the fire hazards associated with the work to be performed
- ii. Make the facility aware of any fire hazards found at the worksite.

1915.502 Fire Safety Plan

1. Employer Responsibilities - This plan is written to ensure employees and subcontractors are aware of the hazards involved with hot work, the precautions taken to control and notification when additional assistance is required.
2. Plan Elements
 - Significant fire hazards
 - Welding
 - Carbon Arcing
 - Torch cutting
 - Brazing
 - Grinding
3. Control of Hazards

All operations requiring a Marine Chemist Certificate must be authorized by **Colonna's Marine Chemist** or his designee if the CSI Marine Chemist is not available.

When a customer specifies or independently contracts a Marine Chemist, the CSI Marine Chemist must also be contacted and issue a separate Certificate prior to commencement of operations requiring a Marine Chemist Certification. Only the CSI Marine Chemist may designate an alternate Marine Chemist. Colonna's Shipyard Inc. personnel may only work in spaces that have been certified by a CSI Marine Chemist (or designated alternate) and/or CSI Competent Person.

THIS APPLIES TO ALL COLONNA'S SHIPYARD INC, COLONNA'S DOWN RIVER and STEEL AMERICA (In yard and off-site).

Note: For navy vessels at shipyards such as NASSCO, MHI and BAE, CSI will follow the host yards hotwork program.

- a. No hot work is permitted until inspected by a CSI Marine Chemist (or designee) and/or CSI Shipyard Competent Person and deemed "SAFE FOR HOT WORK". See attachment 4 for details concerning Marine Chemists and competent persons on CSI contracts.
- b. All flammables and combustibles within 35 feet must be removed or a positive means of protection from sparks, flame and heat has been implemented.
- c. When sparks, flame or heat may be transferred to an adjacent compartment, the same precautions as (a) and (b) must be taken.
- d. Hot work will not be performed in the vicinity of flammable paints or compounds without meeting the requirements of (a).
- e. Torch hoses must be visually inspected and drop tested prior to the hose being run into any space and commencement of hot work. Leaks must be fixed immediately at the shop and hydro-tested.
- f. Unattended torch lines shall not be left in a *confined space*.
- g. Unattended torch lines shall not be left in an *enclosed space*.
- h. Suitable fire extinguishing equipment shall be at the hot work location and be in good working order.
- i. All gas valves must be closed; torch lines must be disconnected from the manifold at the end of each shift. The manifold/bottle caps placed on outlets.
- j. Disconnected torch lines shall be rolled back neatly and removed to the open air.
- k. Trained firewatchers shall be assigned for Hot Work. See attachment 2 Fire Watch training.

4. Recognition and Reporting of Unsafe Conditions

- a. Fires which cannot be controlled beyond the incipient level or contained with on-site equipment and control measures.
- b. Any fire that is not a part of a normal operation.
- c. Fires in areas designated as NO HOT WORK.
- d. Flammable or combustible materials in the vicinity of the operation.
- e. Leaking manifolds or unattended torch hoses.
- f. Hot work in areas where coatings are being applied.

- g. Areas not inspected by a Marine Chemist and/or a Shipyard Competent Person.
- h. Supervisory personnel should be notified immediately of any unsafe condition.
- i. Supervisors will notify Safety, Production and Security via two way VHF radios or cellular phone.
- j. Security will notify the local Fire Department (station 8) via land line when assistance is required.

5. Alarm Procedures

- a. Upon discovery of a fire, the employee will notify others in the vicinity of the situation and designate a person to locate a supervisor.
- b. When the fire is controllable, the Supervisor will notify Production and/or Safety dept. via radio or cellular phone.
- c. Security will be notified when outside assistance is required. Security will notify local authorities.

6. Employee Notification

- a. Employees in the immediate area will be notified by the person performing hot work, the firewatch and any supervisor present.
- b. Other employees affected will be notified by a supervisor, manager, safety dept. or security. Any of the aforementioned may delegate this to another employee when actively engaged in attending a fire.
- c. Employees in the facility will be notified by two-way radio, telephone or in person.

7. Notification of Response Organization

- a. Notification is a function of the Security department. Security is present 24 hours a day/seven days a week.
- b. Notification may be made via radio (channel 2), telephone (extension 2860/2000) or at security stations.
- c. The city municipal fire/rescue station 8 is less than 1/8 of a mile away and response times are generally less than 5 minutes.

8. Evacuation

- a. Evacuation procedures are covered in Attachment 1 "Evacuation Procedures"

9. Contact Information

The following titled personnel may be contacted for further Information or reporting:

Occupational Safety and Health Manager

Extension 757-545-2414 ext.2660; Cellular 757-469-1263

Compliance Director

757-545-2414 ext. 4450; Cellular 757-685-6437; 757-986-3616

Security Captain

757-545-2414 ext. 2970; Cellular 757-472-5805

Security Guard on duty

757-545-2414 ext. 2860/2000

Navy Vessels emergency reporting number: TSDO MARMC 757-400-0000

Employee plan review

- a. All current employees will be provided a review of this plan by April 30, 2007. Employees will be required to acknowledge this review and be trained to ensure comprehension.
- b. New employees will receive a review of the plan including a written test and acknowledgement of comprehension during new employee orientation.
- c. Whenever the plan is significantly revised, a review will take place and all affected employees advised of the changes.

Additional Employer requirements

- a. An electronic copy of the plan is available to each department via Colonna's shared drive. Copies may be obtained from the Safety dept. The plan may be reviewed by any employee, employee representative or an OSHA official upon request.
- b. The plan will be reviewed when changes occur that affect the plan, annually.
- c. The training material will include a test for comprehension.
- d. The local Fire Department (station 8) located within 1/8 mile of the facility and has been provided with a copy of the plan as well as inspections of the facility.

Subcontractors/ Employers

- a. Subcontractors will be provided with a copy of the plan and acknowledge their agreement to comply with the contents.
- b. Prior to award/commencement of all shipboard related tasks, all sub contractors will submit a written task description, supporting plans list of hazardous materials being used and Safety Data Sheets for review by the Occupational Safety and Health Manager and/or Compliance Manager approximately 10 business days prior to commencement of work.
- c. Records of formal training for subcontracted employees will be made available to the facility upon request.

1915.503 Precautions for Hot Work

General Requirements

- a. Designated Workplaces – There are no “designated” areas in the facility that may perform hot work without proper procedures being followed. All vessels, shops, worksites must be inspected prior to Hotwork and a Hotwork Notice posted per Section 39 of the Safety Manual.
- b. Non-Designated Workplaces

- i. Offices, storage buildings, vessels, worksites etc. must be inspected prior to any operation which may result in a fire.
- ii. Non-designated workplaces must be free of hazards and/or post firewatches, be physically isolated or have some other positive means of fire prevention approved by CSI Shipyard Competent Person or CSI Marine Chemist.

Specific Requirements

- a. Maintaining Fire Hazard Free Conditions – Designated areas must be maintained free from hazards that could contribute to the spread of fire.
- b. Fuel Gas and Oxygen Supply Lines – The following requirements must be completed:
 - i. Unattended torch lines shall not be left in a *confined space*.
 - ii. Unattended torch lines shall not be left in an *enclosed space*.
 - iii. All associated gas valves must be closed; torch lines must be disconnected at the weather deck from the manifold. All caps must be re-installed on the manifold or bottles and racked when not in use.
 - iv. Torch hoses must be visually inspected then drop tested prior to the hose being run into any space before the commencement of hot work. Leaks must be fixed immediately per Colonna's hose repair procedure section 40 in CSI safety manual.
 - v. Hose stations, fire extinguishers and fire escape paths shall not be blocked by equipment and maintained this way on a daily basis.

1915.504 Firewatch Policy

Written Fire Watch Policy - This policy states the specific requirements for employees performing fire watch duties.

1. Training will be in accordance with 1915.508., NAVSEA Standard Item 009-07 and CSI-TR-001 Firewatch Training (Attachment 2). A written examination will be given at the end of training. A passing score of 75% must be achieved. Upon completion of training, the firewatch will acknowledge by signature, that the training was accomplished and they understand their duties.
2. Firewatch duties are as follows:
 - a. Remain alert and on the assigned post at all times during hotwork
 - b. Inspect the area for combustibles, flammables and protect or remove prior to hotwork commencing
 - c. Have the appropriate fire extinguishing equipment on hand for specific fire hazard and know how and when to use it
 - d. Develop a communication system with the hot worker to alert them to hazards during hotwork
 - e. Wear the appropriate PPE

- f. Review the CSI Marine Chemists Log and/or CSI Competent Persons Log and it's location and ensure the space is safe for entry and hotwork before hotwork begins
 - g. Alert others in the area when hotwork is to begin.
 - h. Watch for changes in the area i.e. leaks, other personnel, work in adjacent spaces etc.
 - i. Notify personnel in the area of a fire that has gone beyond the incipient stage.
 - j. Continually look for other workers and equipment that may begin to work in the 35 feet work zone.
3. Equipment
- a. Fire extinguishers must be checked prior to the commencement of Hotwork. All levels of fire suppression agents shall be properly filled, pressures shall meet specifications provided by the manufacture and bottles must be sealed properly.
 - b. The equipment must be inspected to ensure it will operate properly.
 - c. Any fire proof material used to cover equipment must be properly secured.
4. Personal Protective Equipment
- a. The minimum protective equipment is Eye Protection, Foot Protection and Hard Hat
 - b. Dependent upon conditions, other PPE may be required such as Hearing Protection, Respiratory Protection, Fall Protection, skin protection including gloves and long sleeves and any other as deemed necessary by the Safety and Health Department or your supervisor.
5. Posting Fire Watches
- Fire watches must be posted when any of the following conditions exist
- a. Slag, sparks or weld splatter may pass through an opening or to another deck and cause a fire.
 - b. Fire resistant curtains are not used to prevent ignition of combustibles
 - c. Flammable and Combustible material cannot be removed or shielded within 35 feet of the hotwork in any direction
 - d. Hot work is performed on or near insulation or panels that can not be removed.
 - e. Adjacent spaces may be affected by sparks, fire or heat transfer.
 - f. Radiant Heat may affect pipe lines, bulkheads, decks or combustible coatings
 - g. The work is close to pipelines or cables which are combustible.
 - h. A CSI Marine Chemist or CSI Shipyard Competent Person requires that a firewatch is to be posted.
6. Assigning Employees to fire watch
- a. The fire watch shall not have any other duties while Hotwork is in progress.
 - b. Firewatchers Must:

- i. Have clear view of and immediate access to the area to be watched
- ii. Be able to communicate with the hot worker(s)
- iii. No more than 4 hot workers can be attended by a single firewatch.
- iv. Authorized to stop work as needed to maintain safe conditions.
- v. Remain in the area for 30 minutes after hotwork has stopped or the Supervisor determines no further hazard exists.
- vi. Be trained to recognize fire hazards in other areas exposed to hotwork
- vii. Attempt to extinguish any incipient fire within the capabilities of their equipment and training.
- viii. Alert others when assistance is needed
- ix. Notify others to evacuate in the event a fire is beyond their capabilities
- x. Wear a high visibility vest, or possess a Fire watch qualification card or hard hat decal provided by the safety department.
- xi. Be attentive and not use any cellular communication devices.

c. Physical Ability

The employer must ensure the employee assigned to fire watch duties is physically capable to perform these duties.

1915.505 – Fire Response

A. Employer Responsibilities

- 1. The Norfolk Fire and Rescue and Colonna's Shipyard Inc. have entered into a written agreement for their response to emergency situations. See Attachment 3. This facility does not have trained in-house fire response personnel beyond incipient stage.
- 2. This plan serves as the policy for response organizations.

B. Required Policy Information – (1) this plan serves as the written policy.

- 1. No in-house trained response team exists. Employees will make every attempt to extinguish and/or control a fire without jeopardizing their safety.
- 2. Outside Fire Response – This plan with attachments, serves as the policy.
 - i. Fires beyond the capabilities of the facility will be responded to by the Municipal Fire Department.
 - ii. Facility Security officers are the initial liaison between the municipal response team and the facility. Safety, production and supervisory personnel will assist as needed.
 - iii. Plan for Fire Response Functions
- 3. The facility Security Force will contact the Municipal Fire Department. Security is maintained at the facility 24 hours a day, seven days a week.
- 4. The local fire Station has received a copy of the plan. They have visited the facility and are familiar with the shipyard layout.

5. During previous visits, it has been established that the Municipal Fire Department is equipped to connect into the facility fire main and associated equipment.
6. The facility will not allow incompatible hose connections to be used.

C. Combination of Internal and Outside Fire Response

The facility has only incipient fire trained response personnel. They will assist as requested by the Municipal Fire Fighting Team.

D. Employee Evacuation

- i. Emergency Escape Procedures are covered in Attachment 1
- ii. Employees remaining at the site will be in support of the Municipal Fire Fighting team. When directed, they will evacuate per Attachment 1.
- iii. Accountability for personnel is outlined in Attachment 1.
- iv. The preferred means of reporting fires is via telephone. Cellular phones are available as a back up. In the case of total communication loss, a representative will be dispatched to the local fire station 8.
- v. The following titled personnel may be contacted for further Information:
 - a. **Safety and Health Manager**
Extension 2660; 757-545-2414 ext.2660; Cellular 757-469-1263;
 - b. **Compliance Director**
757-545-2414 ext. 4450; Cellular 757-685-6437; 757-986-3616
 - c. **Security Captain**
757-545-2414 ext. 2970; Cellular 757-472-5805;
 - d. **Security Guard on duty**
Extension 2860/2000 757-545-2414

E. Rescue and Emergency Response.

1. Rescue will be performed by the Municipal Fire Department as outlined by attachment 3.
2. As well as Medical treatment for shipyard employees.
3. The facility has no employees trained for mass casualty events.
4. Organization of Internal Fire Response Functions
5. The facility has no employees trained beyond an incipient level fire.
6. Personal Protective Clothing and Equipment for fire response employees does not apply.

1915.506 Hazards of Fixed Extinguishing Systems on Board Vessels and Vessel Sections

- A. The facility will comply with the following when employees are exposed to the hazards of a fixed extinguishing system that could create a dangerous atmosphere such as low oxygen.
- B. Requirements for automatic and Manual Systems:
 1. The system will be isolated or positive means used to prevent discharge or
 2. Employees will be trained to recognize
 - i. Alarms and know escape routes

- ii. Hazards associated with the system including disturbing system components.
- C. Sea and Dock Trials
During trials, the system will remain operational, recognizing that when the ship is underway, the vessel crew has complete control of all systems.
- D. Doors and Hatches
 - 1. Doors, hatches, scuttles and all other exits must be working and operational in the event of activation of sprinkler/extinguishing systems.
 - 2. All inward doors and openings must be secured in an open position if the systems pressurization could result in pressures preventing their opening and in accordance with the vessels operating instructions.
- E. Testing the System (1) all employees must be evacuated from the space being tested and the atmosphere must be retested by a competent person as safe for workers prior to re-entry.
- F. The system must be isolated prior to conducting maintenance.
- G. Fixed Manual Extinguishing system – When present the following must be met:
 - 1. Only authorized personnel may activate the system
 - 2. Authorized employees are trained on system operation
 - 3. All employees are evacuated and accounted for from the space before activation.

1915.507 Land Side Fire Protection

- A. Employer Responsibilities – All equipment must meet this OSHA standard for safety in land side structures.
- B. Portable Fire Extinguishers and Hose Systems
 - 1. All extinguishers must meet NFPA10-2018 Standard for Portable Fire Extinguishers.
 - 2. Class II or III hose systems may be used in accordance with NFPA 10-2018 when maintained in accordance with NFPA 14-2003.
- C. General requirements for Fixed Extinguishing systems
 - 1. The main office has a dry fixed sprinkler system as well as building seven, Down River and Maintenance building
 - 2. Automatic Sprinkler System must be in accordance with NFPA 25-2002 and either NFPA 13-2002 or NFPA 750-2003.
 - 3. The fixed system utilizing water must meet NFPA15-2001 and all are maintained by a fire protection contractor.

1915.508 Training

- A. Training will be accomplished as follows:
 - 1. Current employees will be re-trained annually.
 - 2. New employees will be trained at new hire orientation
 - 3. Any significant fire protection changes will require all personnel to be informed.

- B. The following subject matter from 1915.508 will be covered in the training as well as:
1. Emergency alarm signals and evacuation
 2. Primary and secondary escape routes when applicable.
- NOTE: All vessels are unique in some way and the training provided will be as specific as possible but will not cover every space on every vessel.
- C. Additional Training Requirements for Employees Expected to fight incipient stage Fires
1. General principles of hose use and hazards of fighting incipient fires
 2. Hazards associated with fire extinguishers
 3. Proper activation and operation of portable systems.
- D. Additional Training for Shipyard Employees designated for Fire Response.
NO EMPLOYEES ARE TRAINED FOR FIRE RESPONSE.
- E. Additional Fire Watch Training
1. Firewatchers shall be trained i.a.w. CSI-TR-001 Prior to assignment as a fire watch.
 2. Training will be accomplished when changes in the operation that presents a new or different hazard.
 3. Retraining will be done when the employee does not demonstrate the ability and/or knowledge to perform firewatch duties.
- F. Annual training will be accomplished as follows:
1. Basic fire protection principals, fire extinguishers, class of fires, methods of extinguishing a fire.
 2. Live fire training exercise.
 3. Adverse health effects of exposure to fire and smoke.
 4. Physical characteristics of hot work areas.
 5. Hazards of fire watch duties.
 6. Appropriate PPE to be used.
 7. Proper use of PPE and how to don and doff equipment.
 8. Selection and use of extinguishers and hoses to be used.
 9. The location and use of barriers.
 10. Communication with the person performing hotwork.
 11. How and when to start alarm procedures.
 12. Evacuation Plan.
- G. Records
1. Records will include the employee and trainer information and when the training was performed.
 2. Records will be maintained for a period of one year at a minimum or until new training documentation are available.

Definitions applicable:

Alarm -- a signal or message from a person or device that indicates that there is a fire, medical emergency or other situation that requires emergency response or evacuation. At some shipyards, this may be called an "incident" or a "call for service."

Alarm system -- a system that warns employees at the worksite of danger.

Body harness -- a system of straps that may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, shoulders, chest, and pelvis, with means for attaching it to other components of a personal fall arrest system.

Class II standpipe system -- a 1 1/2 inch (3.8 cm) hose system which provides a means for the control or extinguishment of incipient stage fires.

Competent Person-- A person, designated by the employer, who is capable of recognizing and evaluating employee exposure to hazardous substances and other unsafe conditions. The competent person must know and be able to specify protections and precautions to ensure employee safety as required by particular regulations. For NAVSEA requirements the length of the initial training class shall be at least 24 hours. Annual update training shall be at least 8 hours. After this classroom training has been completed and before a newly designated competent person works on his own, they must have a minimum of 80 hours of on the job training with a senior shipyard competent person. After competency has been established the trainee will be given a certificate stating they may work as a SYC person for Colonna's Shipyard and its affiliates.

Contract employer -- an employer, such as a painter, joiner, carpenter, or scaffolding sub-contractor, who performs work under contract to the host employer or to another employer under contract to the host employer at the host employer's worksite. This excludes employers who provide incidental services that do not influence shipyard employment (such as mail delivery or office supply services).

Dangerous atmosphere -- an atmosphere that may expose employees to the risk of death, incapacitation, injury, acute illness, or impairment of ability to self-rescue (i.e., escape unaided from a confined or enclosed space).

Designated area -- an area established for hot work after an inspection that is free of fire hazards.

Drop Test -- a method utilizing gauges to ensure the integrity of an oxygen fuel gas burning system. The method requires that the burning torch is installed to one end of the oxygen and fuel gas lines and then the gauges are attached to the other end of the hoses. The manifold or cylinder supply valve is opened and the system is pressurized. The manifold or cylinder supply valve is then closed and the gauges are watched for at

least sixty (60) seconds. Any drop in pressure indicates a leak.

Emergency operations -- activities performed by fire response organizations that are related to: rescue, fire suppression, emergency medical care, and special operations or activities that include responding to the scene of an incident and all activities performed at that scene.

Fire hazard -- a condition or material that may start or contribute to the spread of fire.

Fire protection -- methods of providing fire prevention, response, detection, control, extinguishment, and engineering.

Fire response -- the activity taken by the employer at the time of an emergency incident involving a fire at the worksite, including fire suppression activities carried out by internal or external resources or a combination of both, or total or partial employee evacuation of the area exposed to the fire.

Fire response employee -- a shipyard employee who carries out the duties and responsibilities of shipyard firefighting in accordance with the fire safety plan.

Fire response organization -- an organized group knowledgeable, trained, and skilled in shipyard firefighting operations that responds to shipyard fire emergencies, including: fire brigades, shipyard fire departments, private or contractual fire departments, and municipal fire departments.

Fire suppression -- the activities involved in controlling and extinguishing fires.

Fire watch -- the activity of observing and responding to the fire hazards associated with hot work in shipyard employment and the employees designated to do so.

Fixed extinguishing system -- a permanently installed fire protection system that either extinguishes or controls fire occurring in the space it protects.

Flammable liquid -- any liquid having a flashpoint below 100 °F (37.8 °C), except any mixture having components with flashpoints of 100 °F (37.8 °C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.

Hazardous substance -- a substance likely to cause injury by reason of being explosive, flammable, poisonous, corrosive, oxidizing, an irritant, or otherwise harmful.

Hose systems -- fire protection systems consisting of a water supply, approved fire hose, and a means to control the flow of water at the output end of the hose.

Host employer -- an employer who is in charge of coordinating work or who hires other employers to perform work at a multi-employer workplace.

Incident management system -- a system that defines the roles and responsibilities to be assumed by personnel and the operating procedures to be used in the management and direction of emergency operations; the system is also referred to as an "incident command system" (ICS).

Incipient stage fire -- a fire, in the initial or beginning stage, which can be controlled or extinguished by portable fire extinguishers, Class II standpipe or small hose systems without the need for protective clothing or breathing apparatus.

Inerting -- the displacement of the atmosphere in a permit space by noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible. This procedure produces an IDLH oxygen-deficient atmosphere.

Interior structural firefighting operations -- the physical activity of fire response, rescue, or both involving a fire beyond the incipient stage inside of buildings, enclosed structures, vessels, and vessel sections.

Multi-employer workplace -- a workplace where there is a host employer and at least one contract employer.

Personal Alert Safety System (PASS) -- a device that sounds a loud signal if the wearer becomes immobilized or is motionless for 30 seconds or more.

Physical isolation -- the elimination of a fire hazard by removing the hazard from the work area (at least 35 feet for combustibles), by covering or shielding the hazard with a fire-resistant material, or physically preventing the hazard from entering the work area.

Physically isolated -- positive isolation of the supply from the distribution piping of a fixed extinguishing system. Examples of ways to physically isolate include: removing a spool piece and installing a blank flange; providing a double block and bleed valve system; or completely disconnecting valves and piping from all cylinders or other pressure vessels containing extinguishing agents.

Protected space -- any space into which a fixed extinguishing system can discharge.

Proximity firefighting -- specialized fire-fighting operations that require specialized thermal protection and may include the activities of rescue, fire suppression, and property conservation at incidents involving fires producing very high levels of conductive, convective, and radiant heat such as aircraft fires, bulk flammable gas fires, and bulk flammable liquid fires. Proximity firefighting operations usually are exterior operations but may be combined with structural firefighting operations. Proximity firefighting is not entry firefighting.

Qualified instructor -- a person with specific knowledge, training, and experience in fire response or fire watch activities to cover the material found in § 1915.508(b) or (c).

Reportable fire per NAVSEA – An unintended ignition of any combustible materials, including smoldering or smoking combustibles.

Rescue -- locating endangered persons at an emergency incident, removing those persons from danger, treating the injured, and transporting the injured to an appropriate health care facility.

Shipyard firefighting -- the activity of rescue, fire suppression, and property conservation involving buildings, enclosed structures, vehicles, vessels, aircraft, or similar properties involved in a fire or emergency situation.

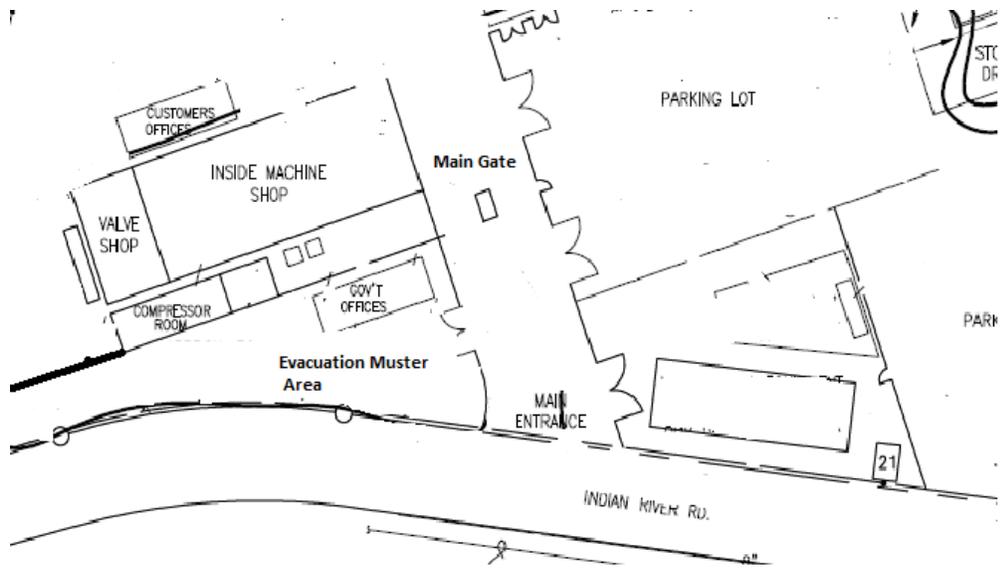
Small hose system -- a system of hoses ranging in diameter from 5/8" (1.6 cm) up to 1 1/2" (3.8 cm) which is for the use of employees and which provides a means for the control and extinguishment of incipient stage fires.

Standpipe -- a fixed fire protection system consisting of piping and hose connections used to supply water to approved hose lines or sprinkler systems. The hose may or may not be connected to the system

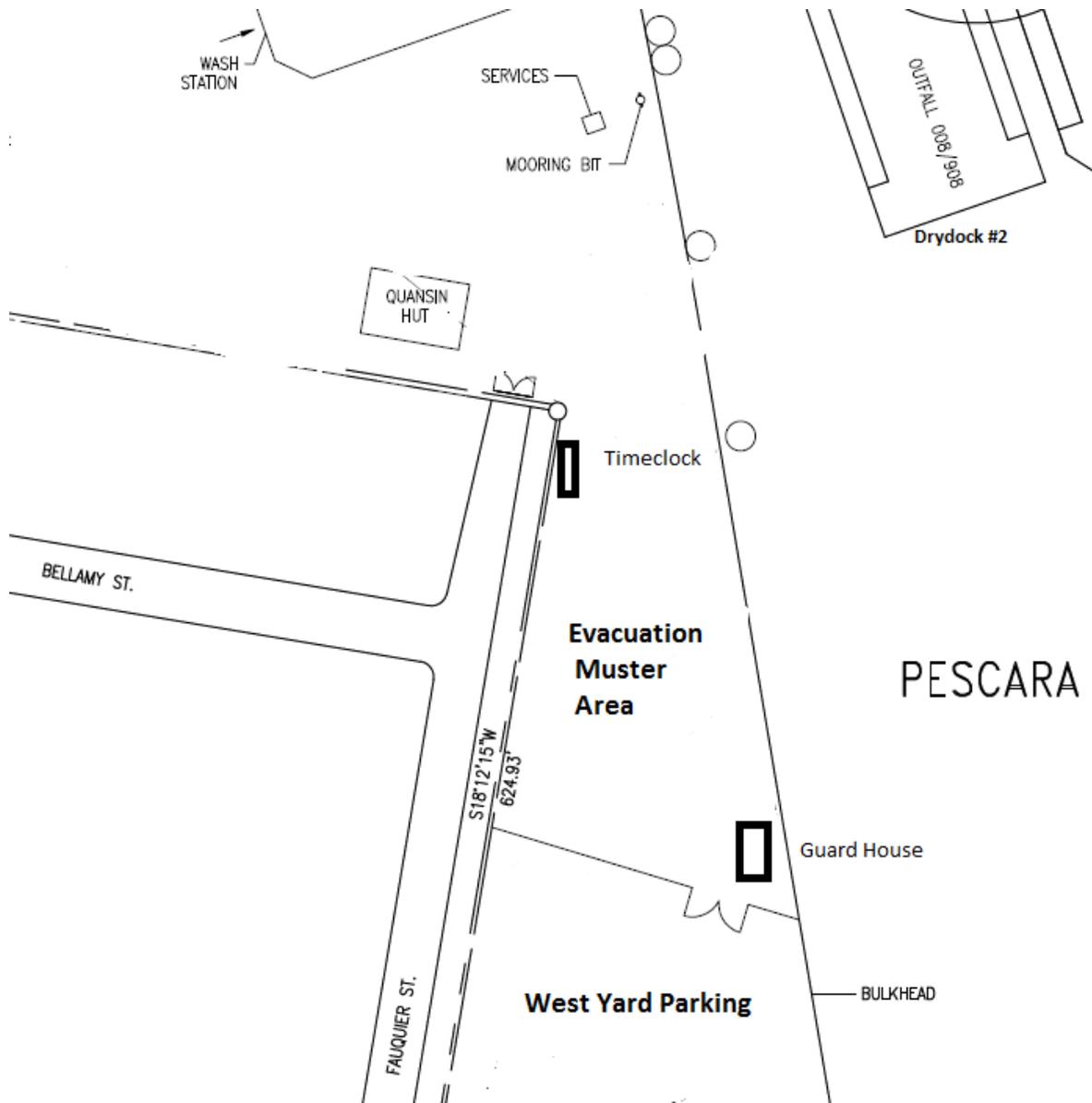
Attachment 1

EVACUATION PROCEDURE (Main and East Yard)

In the event there is reason for a partial or total evacuation of the facility, employees are required to leave their job site and proceed in an orderly manner to the assembly area as indicated on the map below. Should Management determine that the evacuation of personnel is prudent; the order to evacuate will be announced using the telephone system as well as VHF radio. **All personnel working in the East/Main and South yards will proceed immediately to the center main access road in the facility and proceed out the gate in an orderly fashion. All evacuated personnel will muster in the Administrative parking lot near the Inside Machine Shop (See map below). All personnel (if applicable) working in the West yard will go to the muster area located along the fence across from the Guard House. All personnel (if applicable) working in Spotico Creek will go to the muster area located along the fence just North of the Guard House.** Security will assist in directing personnel along the routes. A Muster roster will be taken by Security and supervision to ensure all personnel are accounted for.



Evacuation Muster Area West Yard



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Attachment 2

COLONNA'S SHIPYARD INC. FIRE WATCH TRAINING

CSI-TR-001
(REV. # 6)

ACCEPTED BY COLONNA'S COMPLIANCE DIRECTOR

Frank Wheatley
11/9/2019

FIRE WATCH TRAINING

WARNING: YOU WILL BE TESTED ON THIS TRAINING- PAY ATTENTION- YOU MUST SCORE 75% (15 CORRECT) TO PASS.

A. Fire Principles

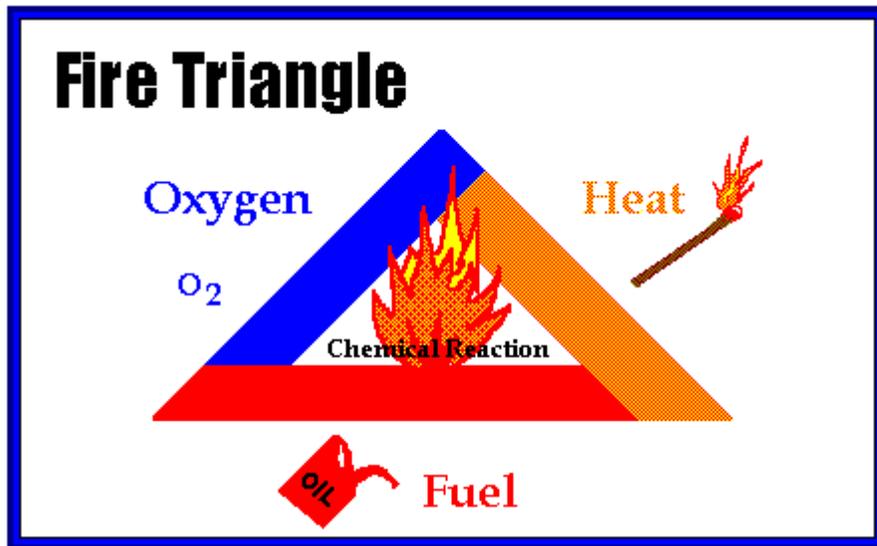
1. Fire is a chemical reaction involving rapid oxidation or burning of a fuel. In order for a fire to survive, three things must be present: fuel, oxygen, and heat (See Fire Triangle Below. If one of these factors is taken away, the chain is interrupted and the fire will go out. Carbon dioxide, as an example, blocks oxygen from reaching the fire.

2. Fires are classified according to the materials involved and the methods of extinguishments. There are four (4) classes of fires that can be encountered while being a fire watch at the shipyard. Class **A** Alpha- Ordinary combustible or fibrous material, such as wood, paper, cloth or any material that will cause ash. Class **A** fire normally identified by production of white smoke. Class **A** may be extinguished with Carbon dioxide (CO₂), water or dry chemical.

Class **B** Bravo- Flammable or combustible materials such as petroleum which includes gasoline, kerosene or paint. Normally identified by heavy black smoke. May be extinguished with carbon dioxide (CO₂), dry chemical.

Class **C** Charlie- Electrical Fire. Can be caused by overheated electric motor, shorts, grounded out circuits or defective insulation. Can be identified by white or black smoke, or by odor. Extinguish with carbon dioxide (CO₂).

Class **D** Delta- certain combustible metals, such as magnesium, titanium, potassium and sodium. These metals burn at higher temperatures and give off sufficient oxygen to support combustion. They may react violently with water or other chemicals and must be handled with care. Extinguishing agents can be sand or earth.



B. Fire Watch Safety Equipment

1. Hard Hats- must be worn at all times while in Colonna's shipyard production areas.
2. Safety/shaded Glasses- must be worn at all times while in Colonna's shipyard production areas and during hot work. Only clear lenses are allowed in the skin of a ship or in a shop.
3. Hearing Protection- must be used in noise hazardous areas (anytime you can't be heard in a normal tone of voice).
4. Safety Shoes/Boots- must be worn at all times while in Colonna's Shipyard production areas.
5. Respirators- As determined by the type of hazard. Will be fit tested by the Safety Department or local health care facility and issued an appropriate respirator. **NO FACIAL HAIR IN THE SEALING AREA IS ALLOWED.**

C. Fire Watch Responsibilities

1. Assigned fire watches attending welders/braziers during hot work shall have a filled water bottle (stirrup pump), CO2 extinguisher (fully charged) or a dry chemical extinguisher in this area based on fire type hazard and or contract requirements. Fire watch shall be alert and attentive (no sleeping). When hot work is complete, stay on scene an additional thirty (30) minutes or until the supervisor has inspected the area and determined no further hazard exists, to ensure no residual or smoldering fires flame up. Return fire extinguishers to storage area at the end of the shift.
2. Where several welders/braziers are performing hot work at one site, the fire watch shall have a clear view and immediate access to each worker performing hot work. A single fire watch shall attend no more than four hot workers.

3. In cases in which hot work may involve more than one level, as in trunks and machinery spaces, a fire watch shall be stationed at each level unless positive means are available to prevent the spread or fall of hot material.

4. In the event that hot work is to be performed on a bulkhead or deck, combustible material shall be removed from the vicinity of the hot work on the opposite side of the bulkhead or deck and a fire watch shall be posted at each location. If multiple blind compartments are involved in any hot work job, fire watches shall be posted in each blind area.

5. Forms:

a. Marine Chemist's Certificate- Posted at quarterdeck and the entrance to a certified space.

b. Competent Person Checklist- Competent person will re-check each space a minimum of every twenty-four (24) hours or as often as necessary to maintain a safe environment.

c. Hot Work Notice- will be delivered to quarterdeck and posted in the space.

D. Care and Use of Fire Extinguishers

1. Make sure the class of extinguisher is safe to use on fires likely to occur in the immediate area.

2. Ensure safety seal is attached to valve handle and that the extinguisher has not been used or tampered with prior to taking to the job site.

3. Once the seal has been broken and the extinguisher used replace with a fully charged bottle.

4. Ensure that the pin, nozzle, and nameplate are intact.

5. Carry by valve handle on bottle or use nylon carry strap.

6. Bottle must always be laid down and within arms reach of the fire watch at job site. The bottle may never be further away than three (3) feet from the fire watch.

7. Steps for using a portable fire extinguisher (PASS)

a. (P) - Pull the Pin

b. (A) - Aim the extinguisher nozzle at the base of the flames. Ensure that when directing the extinguisher horn for CO₂ type, bare skin is not placed on or come in contact with the horn. Always use the handle of the horn only.

c. (S) - Squeeze the trigger while holding the extinguisher upright. When the handle is held open the fire extinguishing agent will be released. To prolong the life of the extinguisher, press and release the handle rapidly using short burst method.

d. (S) - Sweep the extinguisher from side to side. Use caution during the use of CO2 extinguishers. This is due to the extinguisher's horn becoming frosted, which can cause minor (frostbite). Oxygen may also be displaced use extreme caution. **Do not use CO2 in a confined space.**

E. Communication

1. There are two types of communication that can be used between the fire watch and the hot work mechanic. They are:

A. Visual signals:

Circular motion with open hand **Start Work**

Clenched fist or hand moving across throat **Stop Work**

B. Audible signals:

One Tap is command to **Start Work**

Four Taps is command to **Stop Work**

2. In the event that the fire watch needs to leave the operations site for any reason, the fire watch will notify the hot work mechanic before their departure and upon return.

3. When a fire reaches a stage that you cannot control, you must alert others by passing the word or activating an existing alarm.

4. If and when it becomes necessary to evacuate, the Evacuation Plan must be followed. You must report to the assigned muster area. Do not leave the yard unless directed by Security.

5. Supervisors must perform a documented head count of their personnel.

F. Shipboard Compartment Designation (Numbering System)

1. First number- Deck; main deck and below is single digit (i.e.; 1, 2, 3, etc.) Above the main deck is preceded by a zero (i.e. 01, 02, 03, etc.)

2. Second number- Forward most frames in the compartment entered starting at the bow of the ship.

3. Third number- Side of ship in relation to centerline of ship. Odd numbers designate starboard side. Even numbers designate portside. Compartments with the third number being a zero indicate the compartment is at the centerline of the ship. Standing on stern looking forward towards the bow will put the starboard side of the ship on your right side and the port side will be on your left.

4. The letter in the compartment designation will indicate its use. Examples are L- living, E- engineering, C- communications, K- Flammable Liquid Storage, Q- Storage (also can be fan rooms), M- Magazines/ Weapons storage, A- Storage, W- water tank, F-fuel tank, J-JP5 Tank (type of fuel), G- gasoline tank, V-void, C- Cofferdam.

So in the example 3-125-4-A you are in a compartment on the third deck down, at frame 125, portside second compartment outboard of the centerline and the compartment is a storage room.

F. Hands on Training – Each individual will be instructed and demonstrate the proper use of the extinguisher being used. Removal of the locking mechanism and pin, pressure required to pull the handle and how to properly aim the nozzle.

G. Fixed Fire Extinguishing Systems

Some vessels have fire-extinguishing systems that are built into the vessel. When you are in a space with a “Halon, CO2 or other system, check to see if the system is active or has been disabled. Do not work on a charged system that could be activated eliminating the oxygen in the space. Know the alarms when the system is active and evacuate the space when alarms are sounded.

H. Adverse Health Effects of Fire.

1. Smoke – Generally the first indication of a fire may be smoke from the burning substance. Depending what material is burning, toxic fumes may be present. Ensure proper ventilation is used to remove the fumes and smoke. Respiratory protection may be required. Check the Marine Chemists Certificate and/or Competent Persons Log for restrictions. **70%-75% OF VICTIMS DIE FROM SMOKE INHALATION RATHER THAN THE FIRE ITSELF.**

2. Fire/Flames – Serious burns can and do occur when a fire reaches the body. Never stamp out or use your hand to extinguish a flame. Check clothing for worn, ragged edges, or oil soaked clothing which can easily ignite.

3. Reduced vision- Smoke irritates the eyes and thus reduces your vision. Smoke can also block your vision making it difficult to find your way out of a space.

I. Physical Characteristics of Hot Work Areas

1. Check each area for combustibles and flammable materials prior to beginning hotwork. Remove and/or protect as necessary to prevent these from flames and sparks.

2. Know the area and the escape routes. Many vessels have several ways in and out of a space know where these are. Interior spaces on a vessel may

be coated with paint, preservative compound or residual product.

3. Many spaces are multi-level and stairs or ladders may be used to gain access to different parts of the area.

J. Barriers

1. Barriers are used to prevent unwanted personnel from entering the hot work area.

2. Barriers are also used to prevent personnel from falling in a deck opening or open tank cover. Never leave a fall hazard unattended until it has been corrected.

3. Examples of physical barriers are rope, cable, hand rails, saw horse, hoops, and cones, portable hand rail and foldable man-hole guards.



1. Fire Watch Training Quiz

Print Your Name

Employee #

Date

CAUTION: Choose the **Most Correct** Answers on This Test

- 1) How does carbon dioxide (CO₂) extinguish a fire?
 - A. Covers with water
 - B. Displaces Fuel
 - C. Blocks Oxygen
 - D. Heats

- 2) While engaged as a fire watch in a blind location, heat from work being performed in an adjacent compartment ignites paint on the bulkhead. What class of fire is it?
 - A. Class Alpha
 - B. Class Bravo
 - C. Class Charlie
 - D. Class Delta

- 3) During hot work operations, sparks from the mechanic's torch ignites some paper. What class of fire is it?
 - A. Class Alpha
 - B. Class Bravo
 - C. Class Charlie
 - D. Class Delta

- 4) What extinguishing agent should be used on a Class Charlie fire?
 - A. Pressurized Water
 - B. Sand
 - C. Carbon Dioxide
 - D. Submersion

- 5) How long must a fire watch remain on the scene after the hot work is complete?

- A. 2 hours
 - B. 45 minutes
 - C. 30 minutes
 - D. 1 hour
- 6) How many hot work mechanics **in clear view** can the fire watch attend at any one time?
- A. One
 - B. Two
 - C. Three
 - D. Four
- 7) Which form does **not** need to be filled out before hot work commences?
- A. Marine Chemist's Certificate
 - B. API Certificate
 - C. Competent Person's Checklist
 - D. Hot Work Notice
- 8) During hot work operations, it is necessary to use the fire extinguisher. At what point does the fire extinguisher need to be replaced?
- A. When the CO2 charge is 15 lbs
 - B. When safety seal has been removed and the valve handle opened.
 - C. After 23 minutes has elapsed
 - D. When the CO2 charge is less than 13 lbs.
- 9) How should a fire extinguisher be carried?
- A. By the bottom
 - B. Between the legs
 - C. By the handle or nylon carry straps
 - D. Rolled on edge
- 10) What is the proper position of a fire extinguisher when not in use?
- A. Upright against bulkhead
 - B. Held by the handle
 - C. Lying on it's side on the deck
 - D. Upright with the safety seal removed
- 11) Where should the fire watch be in relationship to the fire extinguisher?

- A. Bottle lying on deck and the fire watch sitting on it
- B. Bottle standing upright and fire watch standing against bulkhead
- C. Bottle lying on deck within three (3) feet of the fire watch
- D. Bottle standing upright within three (3) feet of the fire watch

12) What is the proper method for using a fire extinguisher?

- A. **PLAN** – Pull the pin; lay the fire extinguisher on the deck; Aim the nozzle at the base of the flames; Notify the quarterdeck
- B. **PASS** – Pull the pin; Aim nozzle at the base of the flames; Squeeze the trigger while holding the extinguisher upright; Sweep the nozzle from side to side
- C. **PAIR** – Pull the pin; Aim the nozzle at the top of the flames; Inform the quarterdeck; Return to the shop
- D. **PALE** – Pull the pin; Aim the nozzle at the top of the flames; Lock down the handle; Escape from the compartment

13) How can the life of a CO2 extinguisher be extended?

- A. Press and release the handle rapidly
- B. Press the handle for 10 seconds, release, repeat
- C. Shake the extinguisher
- D. Tap the horn on the floor when CO2 stops

14) What are the **two** primary safety precaution that must be observed **while discharging** a CO2 extinguisher?

- A. Changing the oxygen concentration in a confined space
- B. Keep hands off the cold horn
- C. Direct flow of CO2 toward the top of the flames
- D. Replace fire extinguisher with a new one

15) If the hot work mechanic and the fire watch are in **separate** compartments, how do they stay in contact with each other?

- A. Sound powered phones
- B. Prearranged Signals (tapping)
- C. Yelling
- D. Hand Signals

16) What is the procedure for the fire watch if they need to leave the operation site?

- A. Depart the site
- B. Notify the hot work mechanic
- C. Notify the fire watch coordinator and take a 20-minute break
- D. Notify the hot work mechanic, leave, and then notify the mechanic upon return

17) What deck is compartment 2-174-0-K on?

- A. Main Deck
- B. "Crow's Deck"
- C. Fantail
- D. Second Deck

18) What is the purpose of the Fire Protection Plan?

- A. To provide protection of employees from fire hazards associated in Shipyards
- B. For OSHA to have more standards to enforce
- C. To make sure all welders use the right rods & wires
- D. All of the above

19) Which of the following is considered to be an unsafe condition?

- A. Fires that can not be controlled with on-site equipment
- B. Areas not inspected by a Marine Chemist or a Competent Person
- C. Leaking or unattended torch hoses
- D. All of the above

20) Which of the following is NOT part of the evacuation procedure?

- A. Leave their job site
- B. Proceed in an orderly manner to the assembly area for a head count
- C. Stop at the bathroom in case the evacuation takes a long time
- D. Muster in the Administration parking lot outside of the Inside Machine Shop

21) True or False - Torch Lines must be disconnected from the manifold at the end of each shift and the manifold or bottle caps replaced.

22) What training and what areas must be accomplished as part of the Fire Protection Plan?

- A. New Employees will be trained during New Hire Orientation
- B. Annual training to maintain awareness
- C. Evacuation procedures
- D. All of the above

23) True or False- A Marine Chemist's certificate allows you to automatically enter a space.

24) True or False – It is only necessary to check the other side of a deck or bulkhead when the hot work will penetrate the deck or bulkhead.

25) During a drop test per OSHA you should watch the gauge for how long?
a. 1 minute c. 2 minutes
b. 3 minutes d. 90 seconds

26) True or False – Leaks are acceptable when the torch will only be used outside.

27) A fire watch can leave the work area for how long during hotwork?
a. 5 minutes c. 30 seconds
b. Never d. 10 minutes

28) How many fire watches (minimum) are needed when cutting through a deck where combustible materials are located on both sides?
a. 2 c. 1
b. 4 d. 0

29) True or False - The **RED** side of a torch hose is for oxygen.

Signature

Trainer Signature

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ATTACHMENT 3

Norfolk Fire Rescue
100 Brooke Avenue Suite 500
Norfolk, Virginia 23510
Phone (757) 664-6600

To: Commanding Officer

From: Norfolk Fire & Rescue (Station 8)
526 Frederick Street
Norfolk, Virginia 23523

RE: Emergency Response Assignments to Shipyards

Sir,

In regards to your request, the following information is how the Emergency Response Assignments (Units) are dispatched to the shipyards.

Fire Alarms

The Minimum Assignments

3 Engine Companies – Advanced Life Support Equipped
1 Aerial Ladder Company – Advanced Life Support Trained Personnel
1 Tech. Rescue Company Technical Response & Haz-Mat trained
1 Battalion Chief
(Note: Medic Units will be assigned once a status report is given)

If there is a fire on a ship, we do not try to take command of the firefighting activities. We are there to assist the firefighters aboard the ship. **The only times that we would take charge would be at the captain's request.**

If the Captain requests that the Norfolk Fire & Paramedical Services take charge of the Fire Operations, we would like to request the following from your personnel.

1 – One person assigned to our Officer in Command on board the ship, to assist in the location of the fire, ventilation, water supply etc.

2 – Once person assigned to the Officer in charge of support personnel at pier, to assist other units and personnel coming in to the appropriate locations, water supply large equipment support, etc:
(This person could be from the shipyard)

We feel that if this occurs we will be able to gain Fire Control in amore timely manner and cut down on any possible confusion.

Industrial accidents

If a rescue Or Recovery is needed the Following Units are dispatched

- 1 - Fire Unit Advanced Life Support Equipment
- 1 – Medic Unit Advanced Life Support Equipped
- 1 – Tech. Rescue Technical Response & Advanced Life Support Equipped
- 1 – Battalion Chief (Fire)

Note: Additional Units, as Necessary, would be dispatched as soon as a “Scene Status Report” is given.

Station 8 is located within one mile of your location.

The Equipment at Station 8 Consist of the Following:

- 1 – Fire Engine – Advanced Life Support Equipped
- 1 – Aerial Ladder Company Advanced Life Support Trained Personnel
- 1 – Rescue Unit Advanced Life Support Equipped

I hope the following information will aid you. Please feel free to contact the following Officers at Fire Station 8 at 441-1970 if you have any further questions.

Capt. Bill Raney “A” Shift
Capt. M. Spencer “B” Shift
Capt. Jonathan Murphey “C” Shift

Sincerely,
Fire Station 8 -



April 18, 2019

Colonna Shipyard Inc.
400 East Indian River Rd.
Norfolk, Virginia 23523

Subject: Continued Primary Emergency Responder Request
Ref: OSHA 29CFR1915.502

Mr. Nicastro,

In reference to your *Continued Primary Emergency Responder Request*, Norfolk Fire-Rescue will continue the following support:

- Primary Confined Space Rescue Responder
- Primary Rescue Responder
- Primary Fire Responder
- Primary Medical Emergency Responder
- Primary Haz-Mat Responder

***Note:** Response times may be affected by weather, traffic and other service requests. In most cases, delays in response time will be minimal. However, Norfolk Fire-Rescue is unable to notify a company immediately in the event its rescue service becomes unavailable as required for construction employment by 29 CFR 1926.1211.*

This approval will be in effect from the date of this letter to December 31, 2019 at which time the request will need to be reapproved.

Sincerely,

Michael Brooks
Acting Fire Chief
Norfolk Fire-Rescue

References:

NAVSEA Standard Item 009-08 Fire Protection at Contractors Facility
NFPA Standard 312
NFPA Standard 1962
29 CFR Part 1915
Colonna's Fire Protection Plan

3.6.1 – The fire protection system consists of the requirements detailed in Section 33. Fire Protection Plan of the facility Safety Manual and this document.

3.6.2 Fire pumps and associated equipment:

Fire Pumps

Pumps # 1, 2 and 3 supply the main yard @ 1000 GPM at a pressure of 180-190 PSIG.

Pumps # 1, 2 and 3 are on city power. Emergency power is provided by a dedicated stand-by generator with auto start.

Pumps # 1 and 2 are supplied with saltwater.

Pump # 3 is supplied with saltwater only.

Pump # 4 is located at the gas free pier (East side of yard) rated at 500 GPM at 150-160 PSIG.

Pump # 4 is supplied with saltwater only and operates on city power.

Pump # 6 is located in the main yard rated at 2000 GPM at 150-165 PSIG.

Pump # 6 is operated on city power and diesel generator back-up power.

Pumps # 7 & 8 are for the west yard, supplied with saltwater rated @ 1000 GPM /160 PSIG and operates on city power. Emergency power is provided by a dedicated stand-by generator with auto start.

3.6.3 The facility fire pumps are normally powered by the municipal power grid. In the event of a power failure, there are two emergency diesel generators on stand-by for emergency power. The Maintenance Department tests these units on a monthly basis. The systems are independent of municipal systems.

Rental generators are on an as needed basis from Sunbelt Rental @ 757-436-2403

Fire hoses are inspected within 90 days before being put in services and inspected annually.

Hose sizes are 2 1/2 " ID with hose thread and 1 3/4" with NPT threads.

Hose nozzles are of the straight brass stream and spray/fog pattern combination.

Hose manifolds have a recirculation loop to prevent freezing.

3.6.4 Availability of other equipment:

Emergency lighting – Portable light towers are located in various areas in the

facility where additional lighting is needed and will be relocated as necessary.
Portable Cranes – Located in areas as needed and will be relocated as necessary.

Forklifts - Located in areas as needed and will be relocated as necessary.

Dewatering pumps 6 ea. Gasoline power located in the Maintenance Dept.

Portable pumps - Gas Free Dept. has portable air diaphragm pumps and hoses available at Pier 6, at the shop and at various locations throughout the facility.

Supplemental fire hoses – Services Department maintains a supply of hydro-tested fire main hoses.

Two-way VHF radios – The vessel quarterdeck is provided a two-way radio upon arrival which is monitored by Security on Channel 2 on an around the clock basis.

Cellular phones – Main Gate Security is provided an emergency cellular phone in the event municipal service fails.

Land line phones – Available at various locations throughout the facility.

Spill equipment – Located on both dry dock's, Gantry Run, Pier 5 and the head of Pier 9.

First aid equipment – Located in the treatment rooms in both the Main and West Yards.

3.6.5 Colonna's Shipyard relies on the City of Norfolk Fire- Rescue for Fire-Rescue Services. NFR and Colonna's have entered into a signed agreement for emergency response.

3.6.6 Station 8 which is located less than a quarter of a mile with a response time of approximately 5 minutes.

3.6.7 Station 8 regularly visits the facility and has adaptors (if required) to connect to the facility fire main.

3.6.8 For emergency calls contact Colonna's Security @ 545-2414 ext. 2000/2860 or by two-way radio Channel 2.

3.6.9 Colonna's personnel only fight incipient stage fires. Training is conducted as detailed in the Fire Protection Plan and includes live fire training. Colonna's will provide any and all assistance requested to support NFR.

3.7.0 NFR and the shipyard tour various vessels throughout the year and meet to discuss emergency response. The "system" is active whenever work is on-going in the facility.

Contact Information:

Safety dept. 545-2414 ext. 2660 or 2800

Services dept. 545-2414 ext. 2070

Maintenance dept. 545-2414 ext. 3500

Compliance Director 545-2414 ext. 4450

Attachment 4

Marine Chemist Certification/Shipyard Competent Person Requirements

1. All operations requiring a Marine Chemist Certificate must be authorized by **Colonna's Marine Chemist** or his designee if the CSI Marine Chemist is not available.
2. When a customer specifies or independently contracts a Marine Chemist, the CSI Marine Chemist must also be contacted and issue a separate Marine Chemist Certificate prior to commencement of operations requiring a Marine Chemist Certification.
3. Only the CSI Marine Chemist may designate an alternate Marine Chemist.
4. Colonna's Shipyard Inc. personnel may only work in spaces that have been certified by a CSI Marine Chemist (or designated alternate) and/or CSI Competent Person. **THIS APPLIES TO ALL COLONNA'S SHIPYARD INC/COLONNA DOWNRIVER/STEELAMERICA (In yard and off-site).**

OSHA excerpt on Marine Chemist vs. Shipyard Competent Person

A. Certified Marine Chemists (CMC) are required to test for hot work in confined and enclosed spaces, adjacent spaces, and equipment (such as fuel tanks, cargo tanks, piping, pumps, etc.) containing, or that have previously contained, flammable or combustible liquids or gases. Tests to be performed include:

- Atmospheric Testing
 - Oxygen
 - Flammable gases and vapors
 - Toxic
 - Inerted atmospheres (<8 percent oxygen) in adjacent spaces
- Flammability of residues and coatings
- Verification of inspections for hot work conducted by other shipyard personnel
- Ensuring pumps and piping are secured or "gas free"

A marine chemist issues a certificate for hot work, which must be posted. The Marine Chemist Certificate identifies condition of spaces, such as "Safe for Hot Work" or "Atmosphere Safe for Workers." Spaces that are designated "Not Safe for Workers" or "Not Safe for Hot Work" must be labeled.

B. Shipyard Competent Person (SCP) is required to test for hot work in certain spaces that do not require a Marine Chemist. However, the employer may use a Marine Chemist to conduct all the tests required by a Shipyard Competent Person. The Shipyard Competent Person's testing responsibilities include:

- Calibrating and maintaining test equipment.

- Testing and inspecting hollow structures including:
 - skegs,
 - pipe stanchions and handrails,
 - booms,
 - masts, and
 - Rudders.
- Testing and inspecting spaces not requiring Marine Chemist certification including:
 - dry cargo holds,
 - bilges,
 - vessel modules,
 - tanks, and
 - landside confined or enclosed spaces,
- Conduct tests and visual inspections to maintain a Marine Chemist Certificate.
- The Shipyard Competent Person must complete the Inspection Record (Shipyard Competent Person Log), which must be posted. This record identifies conditions of spaces, such as "Safe for Hot Work" or "Safe for Workers." Spaces that are designated "Not Safe for Workers" or "Not Safe for Hot Work," must have warning signs and labels posted at the entrance of the space.
- **Exception:** On dry cargo, miscellaneous (such as tugs, barges, supply boats, etc.) and passenger vessels and in the landside operations within spaces which meet the standards for oxygen, flammability and toxicity in 1915.12, but are adjacent to spaces containing flammable gases or liquids, as long as the gases or liquids have a flash point below 150 deg. F (65.6 deg. C) and the distance between such spaces and the work is 25 feet (7.5m) or greater.

Attachment 5



COMPETENT PERSON 80HR OJT SHEET

Per the Colonna's Safety Manual, Chapter 33 – Before a newly designated Competent Person (CP) works on their own, they must complete a **minimum** of 80 hours of on-the-job training (OJT) with a senior shipyard competent person. After competency has been established the trainee will be given a certificate stating they may work as a CP for Colonna's Shipyard.

Trainee's Name: _____ Employee #: _____

Date of initial course completion: _____

DATE	OJT HOURS	CP INITIAL	DATE	OJT HOURS	CP INITIAL

Total OJT hours: _____

I, _____, as a senior CP at Colonna's Shipyard verify the

Senior CP Print

above trainee has completed a minimum of 80 hours of OJT and has established his/her necessary of competency and is qualified to work as a CP for Colonna's Shipyard and its affiliates.

_____ / _____

Senior CP Signature / Employee #

