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## **8000 Marine Fire Fighting**

### **8100 Authority**

Among the provisions of the Ports and Waterway Safety Act of 1972 (PWSA) (33 U.S.C. 1221 et seq.) is an acknowledgement that increased supervision of port operations is necessary to prevent damage to structures in, on , or adjacent to the navigable waters of the U.S., and to reduce the possibility of vessel or cargo loss, or damage to life, property, and the marine environment. This statute along with the traditional functions and powers of the Coast Guard to render aid and save property (14 U.S.C. 88(b)), is the basis for Coast Guard firefighting activities. 42 U.S.C. 1856-1856d provide that an agency charged with providing fire fighting protection for any property of the United States may enter into reciprocal agreements with state and local firefighting organizations to provide for mutual aid. This statute further provides that emergency assistance may be rendered in absence of a reciprocal agreement, when it is determined by the head of that agency to be in the best interest of the United States.

All aspects of this ACP apply to a Marine Fire Fighting Response. The following two manuals are key references on the Coast Guard's role in marine fire fighting:

Marine Safety Manual, Volume VI, Chapter 8, Coast Guard Firefighting Activities

NFPA 1405, A Guide for Land-Based Fire Fighters Who Respond To Marine Vessel Fires

### **8200 Policy**

The Coast Guard has traditionally provided fire fighting equipment and training to protect its vessels and property. Captains of the Port (COTPs) are also called upon to provide assistance at major fires on board other vessels and waterfront facilities. Although the Coast Guard clearly has an interest in fighting fires involving vessels or waterfront facilities, local authorities are principally responsible for maintaining firefighting capabilities in U.S. ports and harbors. The Coast Guard renders assistance as available, based on the level of training and the adequacy of equipment. The Commandant intends to maintain this traditional "assistance as available" posture without conveying the impression that the Coast Guard is prepared to relieve local fire departments of their responsibilities. Paramount in preparing for vessel or waterfront fires is the need to integrate Coast Guard planning and training efforts with those of other responsible agencies, particularly local fire departments and port authorities. COTPs shall work closely with the municipal fire departments, vessel and facility owners and operators, mutual aid groups, and other interested organizations. The COTP shall develop a fire fighting contingency plan which addresses firefighting in each port in the COTP zone. This plan should be organized in a format similar to the federal area contingency plan as required by the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) (40 CFR 300.43).

## 8300 Operations

The Marine Safety Manual specifically addresses USCG fire fighting activities: “Generally, USCG personnel shall not actively engage in fire fighting (on other than Coast Guard units) except in support of a regular fire fighting agency under the supervision of a qualified fire officer. [NOTE: This term means a person who has been trained and certified, under National Fire Protection Association (NFPA) guideline, to take command of fire fighting operations.] USCG personnel shall not engage in independent fire fighting operations, except to save a life or in the early stages of a fire to avert a significant threat without “undue risk.” [NOTE: An exception is fire fighting operations within port area during certain defense readiness conditions.] With this guidance, the local fire department with jurisdiction will be the Incident Commander for shipboard or waterfront facility fire fighting activities.

### 8310 Operational Firefighting Priorities

Operational fire fighting priorities for marine fire incidents are listed below, in order of priority:

Rescue – Life safety must always be the first consideration in any fire or emergency situation. When lives are in danger, the Incident Commander must quickly assess whether the situation necessitates immediate removal of personnel, the number of persons, which need to be extracted, and the hazards to the rescue team.

Exposures – The fire should be fought so as to prevent the spread of fire on or off the vessel. Typical exposures include flammable liquid or gas tanks, open stairways, explosives, or any other substance, which would accelerate or aid the spread of the fire. Provided there is no danger of water reactivity, exposures are best cooled by application of a fog pattern until no visible steam is generated. For some two-dimensional surfaces foam may be an appropriate agent for exposure protection.

Confinement – Control over the fire must be established by impeding the fire’s extension to non-involved areas and limiting the fire to the area of origin. To accomplish proper containment, all closures and generally all ventilation (unless personnel are trapped inside the space) should be secured. Monitor and cool boundaries, as necessary, on all six sides of the fire (fore, aft, port, starboard, above, and below).

Extinguishment – The main body of the fire should be attacked and suppressed. The goal is to cease combustion by disrupting the cycle of the fire tetrahedron. Tactics and agents to be used will be determined by the fuel source, amount of fuel/surface area, and the location of the fire.

Overhaul – Actions to complete incident stabilization and begin the shift to property conservation should occur in any overhaul. Specific considerations include: hazards from structural conditions at the fire scene, atmospheric conditions (air packs should remain mandatory in the case of interior fire overhaul due to the likely presence of toxic vapors, carbon monoxide, and low oxygen levels), monitoring scene to ensure fire will not re-ignite, determination of fire’s point of origin and source of ignition.

Ventilation – Ventilation tactics will vary depending upon the location and conditions of the fire. Generally, all ventilation on a vessel will initially be secured and all dampers shut upon receipt of a fire alarm. Utilization of ventilation to aid firefighting efforts should not begin until a coordinated attack is staged.

Stability – The use of water for fire fighting can significantly alter the center of gravity of a vessel. Experts from the Marine Safety Center, Atlantic Strike Team, or Navy Support and Salvage should be consulted for stability calculations and advice.

De-watering – Oil and hazardous materials may enter the waters during fire fighting and de-watering operations. Containment and recovery of these materials is an important consideration. Fire fighting operations take precedence over environmental concerns. However, pollution response should be considered at this stage of response. The oil spill and/or hazardous materials response strategies listed below should be initiated at this stage.

## **8320 Off-Shore Fire Fighting Considerations**

In the event of a fire on a vessel offshore and the vessel's crew is unable to contain the fire, the USCG may be designated to act as the Incident Commander to protect U.S. interests under the authority of the Ports And Waterways Safety Act (PWSA). Since local jurisdiction does not extend past three miles off shore, the USCG will utilize available State, Department of Defense and commercial resources. The primary concern with offshore fires, subsequent to successful search and rescue operations, will be the prevention of pollution to U.S. waters and fouling of sensitive fishing areas, wildlife habitats, shorelines, economically important areas, and preventing an obstruction to navigation.

### **8320.1 Decision to Allow Burning Vessel to Enter Port**

Due to limited resources available to fight an offshore fire, the COTP may be forced to consider allowing a burning vessel to enter port. The numerous considerations that are part of the decision can be found in Chapter 8, Volume VI of the Marine Safety Manual. Additionally, the information concerning mooring, anchorage and grounding sites should be reviewed and considered as part of this decision. A burning vessel is only a small part of the resources which must be protected. Entry into a port or movement within the port may have to be denied when:

- There is danger that the fire will spread to other port facilities or vessels.
- The vessel is carrying hazardous cargo such as chemicals, explosives, or gasoline.
- The vessel is likely to sink or capsize within a channel, becoming an obstruction to navigation.
- The vessel might become a derelict.
- Unfavorable weather conditions preclude the safe movement of the vessel or would hamper fire fighting (high winds, fog, strong currents, ice, etc.)

### **8320.2 Movement of a Burning Vessel**

A crucial decision in response to a marine fire involves movement of a burning vessel – whether to allow it to enter the port, to move it to, or away from an anchorage or a pier, to ground the vessel, or to scuttle it offshore. The COTP shall be consulted prior to moving or setting a burning vessel free.

Among the considerations to evaluate in deciding whether to allow a vessel to move within a port are the following:

- Location and extent of fire.
- Capabilities and training of the crew.

- Status of shipboard fire fighting equipment.
- Class and nature of cargo.
- Possibility of explosion.
- Hazards to the environment.
- Hazards to crew or other resources where vessel is situated.
- Forecast weather.
- Maneuverability of the vessel.
- Effect on bridges under or through which the vessel must transit.
- Potential for fire to spread to pier or shoreside facilities.
- Fire fighting resources available shoreside.
- Consequences or alternatives if the vessel is not allowed to enter port or move.

The decision to allow a burning vessel in the Wilmington AOR must be decided by the COTP with input from the cognizant fire chief(s) from the respective fire departments.

#### **8400 Planning**

See Section [4000](#) of this plan, as well as federal, state, and local hazardous material spill contingency plans either directly referenced in this document or implied by association of applicability. The following two sections list the pre-designated responsibilities for the CG and local fire departments.

#### **8410 Municipal Fire Departments**

Upon arriving at the scene, the jurisdictional fire chief assumes the IC and responsibility for all aspects of the fire fighting operation. The vessel's Master should contact the local fire chief and place himself and his crew at the disposal of the fire chief. At no time shall the vessel crew, or other agencies or groups, engage in independent fire fighting activities beyond their capabilities or once the local fire department has taken command of the incident.

The jurisdictional fire chief's responsibilities shall include but not necessarily be limited to:

- Control of all fire fighting operations, both from the shoreside and waterside.
- Establishment of a workable communication system with the units engaged in fire fighting operations, including: assisting vessels, police departments, civil defense and other agencies engaged in the overall operation.
- Formulation of a plan of action for the extinguishment of the fire and the safety of personnel and property.

- Procurement of needed fire fighting equipment, material, and manpower (mutual aid agreements, etc.).
- Procurement of the individual vessels fire fighting plan, stability data and any other pertinent information on that particular vessel.
- Requesting assistance from local police for traffic and crowd control.
- The evacuation of affected persons.
- Requesting assistance of local hospitals and doctors for medical requirements.
- Requesting ambulance service.
- Notification to USCG if not previously done.

#### **8420 U.S. Coast Guard**

The Coast Guard's responsibility during a marine fire incident within the COTP Wilmington zone is the coordination and direction of USCG resources and participation at the Command Post in an advisory role. In addition, the USCG is responsible for:

- Directing the anchoring, mooring, or movement of vessels.
- Restricting vessel operations in hazardous areas.
- Acting as lead agency in the containment and control of any oil or hazardous substance discharge as the result of the marine fire incident.
- Assisting in fire fighting operations within capabilities as determined by the COTP or representative in the Command Post.
- Advising the IC concerning marine fire fighting systems, ship's capabilities, ship stability, environmental considerations, and other aspects where the Coast Guard has special expertise.
- Coordinating marine fire fighting planning and assisting in training development.
- Assume the IC in incidents where jurisdictional questions arise or where it is mutually agreed to by the appropriate fire department representative and the COTP.

#### **8500 Logistics**

##### **8510 Marine Firefighting Resources**

###### **8510.1 U.S. Coast Guard Resources**

USCG phone numbers are in section [9100 Emergency Notification](#).

###### **8510.2 Local Resources**

Local phone numbers are in section [9200 Personnel Services](#).

### **8510.3 Local Resources of Firefighting Foam**

**8600 Finance/Administration**

See Section 6000 of this plan.

**8700 Reserved for Area**

**8800 Reserved for District**

**8900 Reserved**