

Port of Charleston Marine Firefighting Plan

Charleston Captain of the Port Zone



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1. Policy and Responsibility

a. Overview

(1) The Coast Guard, under the provisions of the Port and Waterways Safety Act, has broad authority to prevent damage to, or the destruction/loss of, any vessel, bridge or any other structure on or in the navigable waters of the United States. This includes land structures and shore areas immediately adjacent to those waters. This statute, along with the provision of 14 USC 88(b), provides authority for such assistance against fires as the Coast Guard may afford with its available resources. This authority is exercised so as not to preempt other jurisdiction or agency fire fighting responsibilities.

(2) This plan is written in accordance with the Coast Guard Marine Safety Manual, (COMDTINST M16000.11) which requires Captains of the Port (COTP) to develop current and effective contingency plans, supported by the port community, providing adequate response by the available federal, state, municipal and commercial resources to fires and other port emergencies.

(3) The Federal Fire Prevention and Control Act of 1974 (PL93-498) declared that fire fighting is and should remain a state and local function. Generally, boundaries extend 3 NM from shore along the ocean. State and local fire fighting jurisdiction extend to these boundaries.

(4) The Oil Pollution Act of 1990 (OPA 90) mandated that owners and operators of vessels and Marine Transportation Related (MTR) facilities must identify response resources with fire fighting capability. 33 CFR Part 154 requires MTR facilities that do not have adequate fire fighting resources located at the facility or which cannot rely on sufficient local fire fighting resources must identify and insure the availability of adequate resources within twenty-four (24) hours. 33 CFR Part 155 requires that vessel owners and operators must identify commercial resources capable of deploying to the port within twenty-four (24) hours.

(5) The U.S. Coast Guard has a clear interest in fires involving vessels and waterfront facilities. Although the Coast Guard is routinely called upon to provide assistance at these fires, it is the responsibility of local authorities to provide and maintain the necessary fire fighting capabilities within U.S. ports and harbors. Additionally, vessel and facility owners or operators are ultimately responsible for the safety of the vessel or facility under their control, which includes providing adequate fire fighting protection. Federal policy dictates that Coast Guard personnel shall not directly engage in fire fighting activities on other than Coast Guard units except when necessary to save a life, or when possible to avert a significant threat, with minimal risk to Coast Guard personnel.

(6) The U.S. Navy and other military units provide in-house fire fighting resources to protect U.S. property within their own facilities. They may enter into reciprocal or interagency agreements with local fire fighting agencies to provide

mutual aid; however, this does not relieve local authorities of the responsibility to provide and maintain the primary fire fighting capabilities of the port.

(7) The U.S. Army Corps of Engineers (USACE) is charged with maintaining project depths and dimensions for area navigational channels, which includes keeping channels clear for vessel transit. Should a vessel or facility fire lead to blockage of a navigational channel, the USACE will take appropriate actions to clear the channel. Also, if a vessel fire necessitates the movement or removal of the vessel from the facility, the USACE would contribute to the decision making process on where to move the vessel.

b. Purpose and Objective

(1) The adequate protection of the ports of South Carolina from fire, explosion or other similar incidents is essential to the continued well being of our community. To assure such protection, adequate marine disaster response capability should be available and utilized under well-conceived disaster contingency plans. The U.S. Coast Guard Captain of the Port Charleston (COTP) has developed this Marine Firefighting plan in consultation with our local fire and emergency response agencies and organizations to encourage coordinated planning and exercising.

c. Scope

(1) This plan recognizes the responsibility of the Coast Guard for assuring the safety and security of maritime operations and is the lead federal agency for marine environmental response. It also recognizes the fire department within whose jurisdiction the fire lies is the Responsible Fire Department and is in charge of all firefighting efforts. All response operations rely heavily on locally derived mutual aid agreements between agencies and fire departments. These agreements cross municipal, county and state lines. Mutual aid assures the best use of available equipment, materials and personnel, including commercial resources on a contract basis or government resources on a consumable reimbursement basis. The Charleston County Marine Incident Response Team (MIRT) is an excellent example of these mutual agreements.

d. Recognition of a Coordinated Effort

This plan strives to achieve a coordinated effort amongst federal, state, and local agencies responsible for handling marine fire emergencies. Combating a major marine disaster may require expertise and specialized knowledge of vessel construction and equipment, stability, shipboard fire fighting techniques, damage control, and hazardous material chemistry. In some cases, the services of a foreign language translator may be required. Specialized equipment may be required, such as boats suitable as fire fighting platforms or for transportation of personnel and equipment, or international shore connections and other fittings compatible



with metric or military equipment. Burning vessels may have to be moved across municipal boundaries either to protect port assets or to place the vessel in a better position for combating the fire. In all of these cases, the coordinated effort and

cooperation of the Coast Guard and other federal and state government agencies, fire departments and the vessel's master and crew or facility personnel will be necessary.

e. Roles and Responsibility

(1)The Coast Guard Captain of the Port (COTP) is responsible for the safety of waterfront facilities, vessels, cargo, and associated personnel. The COTP is also responsible for protecting the navigable waters of the U. S. from discharges of oil and hazardous substances.

(2)The COTP will act as liaison between response organizations and maritime interests. The COTP shall not assume control of fire fighting efforts when the appropriate, qualified fire officers are present and available to take control. In any marine fire fighting response, the COTP can restrict port access, control maritime vessel traffic, and conduct emergent SAR activities in the affected area. When notified, the Coast Guard will notify all concerned parties and coordinate with local emergency services to evaluate the possible threats to public health and the marine environment.

(3)The COTP has the authority to take appropriate action to respond to threatened or actual pollution incidents. All fires create a secondary risk of marine pollution, so the COTP will coordinate and direct all public and private efforts necessary to remove or eliminate the threat. In this case, the COTP will act as the FOSC and initiate all response operations under the Incident Command System and Area Contingency Plan.

(4) Coast Guard Sector Charleston retains copies of Facility Contingency Plans for all of the major facilities located within the Ports of Charleston and Georgetown, SC. These plans are maintained and updated by the facilities involved and are responsible for their accuracy. Additionally, the Coast Guard administers programs designed to prevent and minimize marine disasters in U. S.

ports. Two separate but complementary programs address marine fire prevention and protection; The Maritime Vessel Inspection Program, and the Marine Transportation Related (MTR) Facility Inspection Program. Together, these two programs cover the safety of ships, the reduction of the hazards from cargoes carried, and the reduction of fire hazards on waterfront facilities.

f. Federal Assets

(1) Coast Guard (USCG)

(a) Sector Charleston Command Center: (843) 740-7050 The Coast Guard will respond to calls for assistance from local firefighting authorities. While firefighting expertise lies with local fire departments, a marine fire is part of the total picture of port safety and environmental protection.

National Strike Force Coordination Center: (252) 267-3458 maintains a 24-hour watch and can assist the COTP with equipment, personnel, and technical advice. The NSF can also provide dewatering equipment to help maintain vessel stability by pumping excess firewater out of the vessel. Access to the NSF is obtained via the COTP.

(b) Coast Guard Marine Safety Center (MSC): (202) 475-3400 The MSC is staffed by naval architects trained to evaluate stability calculations for all types of vessels and compare them to regulatory requirements. As part of those duties, the MSC maintains a Salvage Team on 24-hour call with the capability to perform technical evaluations of a vessel's hull strength, stability, towing requirements, and volume of liquid cargo spilled for vessels involved in casualties. As marine firefighting emergencies sometimes involve vessel collisions or groundings, the COTP has this valuable resource available to assist local officials to determine best courses of action.

(2) The U.S. Army Corps of Engineers (USACE)

(a) Charleston Office: (843) 725-8908 The USACE is involved if there is a blockage, or potential blockage, of any navigational channel. The Corps will take action to clear the channel and will pursue clearance and/or reimbursement for federally funded work from the ship owner. The USACE must be consulted if plans are made to position a distressed vessel within the harbor. The USACE and COTP will consult in the placement of the vessel so as not to create a hazard to navigation.

(3)U.S. Navy

(a) The Navy Supervisor of Salvage: (202) 781-3889 a division of Naval Sea Systems Command in Crystal City, Virginia, has access to major salvage resources including salvage ships, divers, and submersibles. They also maintain a staff of naval architects trained in ship stability and hull strength calculations and have considerable expertise in towing and refloating all types of vessels.

(b) The Navy Emergency Preparedness Office for the S.E. Region of the United States reports to Commander, Naval Base Jacksonville, Florida. This region matches FEMA Region 4, with 8 states which include; NC, SC, FL, GA, AL, MS, TN and KY. U.S. Navy policy is to respond with available resources to any civil request where life is in imminent danger and where severe property damage can only be prevented by immediate response. The Navy will not respond to the extent of causing damage to their assets or when response will cause a failure of Navy missions.

(4)Federal Emergency Management Agency (FEMA)

(a) FEMA: (800) 621-3362 administers the program whereby federal agencies receive reimbursement for disaster/emergency response in behalf of the civil sector. Generally, federal assets will not be deployed if the required assets are available via city, county, or state resources or if they are available in the civil sector. By law, federal assets cannot compete with commercial enterprise. If FEMA determines that the federal assets should be used, then FEMA issues a Mission Number which provides for reimbursement to the federal agency with the needed assets. In the case of a presidentially declared emergency or disaster, federal assets and funds are made available and managed through FEMA.

g. State Assets

(1)The S.C. Emergency Operations Plan outlines the state firefighting capability for the protection of state assets. Reciprocal agreements with local firefighting agencies for mutual aid are encouraged. However, South Carolina also recognizes firefighting as a local responsibility.

(2)South Carolina Emergency Preparedness Division (SC EPD) (803) 734-8020

(3) South Carolina maintains the SC EPD in the Office of the Adjutant General. The state EPD coordinates planning and emergency response at the state level. Functions of the State government in emergencies are:

- (a) Warn of impending danger and evacuate citizens if necessary;
- (b) Support local government disaster operations with timely, effective employment of state resources to save lives and protect property;
- (c) Provide, or support, public information operations to keep affected residents informed about the situation and how they can protect themselves through the disaster period;
- (d) Coordinate and direct restoration and recovery when local government lacks the capability for such operations or requests state direction and control; and
- (e) Assess needs and obtain support from adjacent states and the Federal Government as necessary and appropriate.

(4) State government assets are available when local governments lack the required capability. In all but the most extreme cases, the Governor of South Carolina will not declare a state-of-emergency until after receiving a recommendation or request from the local county EPD. The EPD will dispatch a Damage Assessment Team to an affected site and assess the damage in relation to their database of local response assets, and in consultation with local response authorities. When the damage assessment reveals that extraordinary measures are needed from state government to support local efforts, the county EPD will request a declaration of a state of emergency from the Governor, who may then activate the SC Emergency Operations Plan. The Governor may request that the President of the United States declare an emergency when the Governor believes that the emergency is of such magnitude that it is beyond the capabilities of the combined state and local governments. A Presidential State-of-Emergency activates federal response to the emergency.

(5) The COTP and the state EPD share the responsibility for contingency planning for disasters. Both agencies are cognizant of resources and capable organizations which may not be within the normal experience of fire departments, but which may be crucial to the successful response to a marine fire. It is essential that both COTP and the state EPD be notified immediately of any marine fire.

h. County Assets

(1)Charleston County Emergency Operations Center (EOC): (843) 202-7400
Provide for the rendering of mutual aid among other counties, and with the State and Federal governments with respect to the carrying out of emergency management functions.

(a) Charleston County EOC shall assume responsibility for ensuring all emergency management functions of the County are coordinated to the maximum extent possible with the comparable functions of the State and Federal governments, including their various departments and agencies, of other counties, states, and localities, and of private agencies.

(2)Maritime Incident Response Team (MIRT)

(a) The MIRT shall maintain continuous liaison with members of the port and firefighting community who will provide expert information, tactics, and forward planning when necessary in a major marine disaster. This group includes all qualified fire fighters and experts in shipboard systems and port operations, with skills in public safety and regional communications.

(b) The MIRT shall be called upon, from time to time, to support the planning process and to participate in annual exercises. At the time of a marine fire disaster, this group would assume an advisory role to the Responsible Fire Department and may be activated to the EOC or Command Post.

(c) Charleston county EMD is the POC to activating the marine incident response team (MIRT)

(d) The fire departments of; Charleston, North Charleston and Mount Pleasant support the MIRT on a three month rotational basis and listed below.

(e) CONTACTS:

January 1st thru April 30th
Division 1: City of Charleston Fire Department
Division Leader: Captain Forrest Cockcroft
Primary Number: 843-514-8272
Secondary Number: 843-296-0434

May 1st thru August 31st
Division 2: North Charleston Fire Department
Division Leader: Battalion Chief Tommy Alix
Primary Number: 843-725-9607
Secondary Number: 843-708-1135

September 1st thru December 31st

Division 3: Mount Pleasant Fire Department
Division Leader: Captain Ken Lamonte
Primary Number: 843-200-5497
Secondary Contact: Chief Robert Wagenbrenner
Primary Number: 843-534-6559
Mount Pleasant Fire Department Dispatch: 843-884-4176

- (f) The purposes of the MIRT are:
- (1) To provide fully trained maritime firefighting personnel
 - (2) To maintain a dialogue and sense of community among parties with an interest in marine firefighting in the port of Charleston;
 - (3) To provide additional resources and maritime expertise to the Incident Commander as necessary;
 - (4) To ensure that all parties responding to a marine fire are operating under the same set of guidelines;

i. Local Assets

(1) The fire department within whose jurisdiction the fire lies is the Responsible Fire Department and is in charge of all firefighting efforts. The fire department should establish a Command Post, staging area, and designate an Incident Commander. All assisting resources will report to the Incident Commander or to the responsible fire department. It is important that the local fire department takes full and immediate control of the situation and makes the appropriate initial declarations to call for backup and assistance as necessary. A major fire on a passenger or freight vessel requires an aggressive offensive plan to prevent loss of the vessel, while a tank ship or tank barge laden with oil products may require a more defensive plan until sufficient equipment and supplies can be brought to the scene to adequately combat the fire.

(2) Chief of the Responding Fire Department has primary responsibility for fighting the fire, directs local fire fighters both on shore and all fire fighters boarding any vessel, (such as the assisting MIRT), formulates tactics on how best to extinguish the fire and coordinates all activities closely with the vessel's master and/or terminal manager, and technical advisors.

(3) Chiefs of Assisting Fire Departments: Will provide support to Responding Fire Department IAW standing MOUs/MOAs.

j. Maritime Industry Responsibilities

(1)Vessel Master

(a) The vessel master is ultimately responsible for safety of the ship and of its crew. International maritime laws require ALL crew members to be trained in shipboard fire fighting procedures specific to their ship and are required to conduct continuous training and drills while on board. Their knowledge and experience makes them the most valuable asset when coming onboard to conduct firefighting operations.

(b) The ship owner will be held responsible for all firefighting costs. Aboard ship, the master is the direct representative of the owner. For a facility, the manager is the direct representative of the owner.

(2)Facility/Terminal Operators

(a) Waterfront Facilities

(b) There are numerous waterfront facilities within the COTP zone of responsibility, and each presents its own fire hazards depending on the commodities handled. Of particular concern are the facilities that handle petroleum products, explosives, or other hazardous materials, as these have the greatest potential for creating disastrous fires.

(c) Marine facility fires will be handled by the assigned local fire department. The COTP will be primarily concerned with establishing a waterside security zone around the facility and keeping vessel traffic clear of the area. The COTP will assign local Coast Guard assets to assist with fighting the fire, should the Incident Commander request Coast Guard Assistance.

(d) Terminal operators may have firefighting resources on site, but in most cases will rely on local fire departments for response. Vessels and waterfront terminals are required to have detailed information of vessel/facility layout and cargo involved.

(3)Bulk Liquid Facility Owners

(a) Any time a fire impacts or potentially impacts a bulk liquid facility or a vessel tied thereto, the COTP and IC/Responding Fire Department should obtain the "Facility Operations Manual", this manual contains all vital information regarding cargo stored on the facility as well as cargo operations conducted at each facility. The owner/operator must be consulted immediately for information regarding potential hazards and mitigation efforts having the highest degree of success. Though not required, some facility owners maintain their own stockpiles of firefighting foam and the equipment to deliver it expeditiously to a fire. Such supplies should be brought to bear as quickly as possible.

k. General Regulatory Responsibilities for Vessels

(1) Vessel Response Plans

(a) Commercial Vessels must have either a vessel response plan (VRP), if it carries oil as a cargo, or a non-tank vessel response plan (NTVRP) for all other cargos. For vessels carrying oil as a primary cargo must also identify a Salvage Company with experience and resources, and a company with vessel fire fighting capability that will respond to areas where the vessel will operate.

(2) Foreign Flagged Vessels

(a) The International Code for Fire Safety Systems (FSS Code): is the guiding authority for all vessels required to maintain fire safety systems by Chapter II-2 of the International Convention for Safety of Life at Sea, 1974. The following areas are discussed in the FSS Code:

1. International Shore Connections
2. Personnel Protection
3. Fire Extinguishers
4. Fixed Gas Fire-Extinguishing Systems
5. Fixed Foam Fire-Extinguishing Systems
6. Fixed Pressure Water-Spraying and Water-Mist Fire-Extinguishing Systems
7. Automatic Sprinkler, Fire Detection and Fire Alarm Systems
8. Fixed Fire Detection and Fire Alarm Systems
9. Sample Extraction Smoke Detection Systems
10. Low-Location Lighting Systems
11. Fixed Emergency Fire Pumps
12. Arrangement of Means of Escape
13. Fixed Deck Foam Systems
14. Inert Gas Systems

I. Important Maritime Professionals:

(1) Marine Chemists

(a) Marine chemists are paid consultants for monitoring efforts during a shipboard fire. They have the equipment and expertise to obtain temperature readings, check for the presence and concentrations of gases and, in some instances, provide needed advice to the firefighting forces concerning the nature of chemically related hazards encountered. The information obtained from marine chemists concerning chemical hazard assessment can be supplemented by contacting CHEMTREC the chemical industry's response and information center at:

(b) CHEMTREC (www.chemtrec.com) Customer Service representatives are available Monday through Friday, 8:30am to 5:00pm Eastern Time Zone, USA & Canada.

(c) Phone: 1-800-262-8200 (within the U.S.) or +1 703-741-5500 (from anywhere in the world). Or email: chemtrec@chemtrec.com.

(2) Shipping Agents

(a) Agents are the local contact for providing necessary provisions and services to visiting ships. In any emergent situation, the agent will act as a direct liaison between response agencies, master of a vessel and the owner/operator of the vessel. The agent should be contacted early during the first response to ascertain the crew's language and ability to communicate in English.

(3) Charleston Pilots Association

(a) The pilots are a wealth of maritime knowledge and experience; South Carolina laws require that a pilot be on-board for all large vessel movements throughout the port. The Pilots Association should be contacted to determine the best method of ship handling and navigation. Phone: (843) 577-6695

(4) Tug Companies

(a) Tug companies should be contacted in the planning phase to evaluate their capability and willingness to provide towing services to burning ships and to determine the level of on board firefighting capability. Tugs are also used to move barges or moored vessels in the vicinity of a burning ship or facility. If so equipped, tugs can be used for firefighting or to prevent the spread of fire by cooling vessels or structures in close proximity to a fire.

(b) McAllister Towing of Charleston: Phone: 843) 577-6449

(c) Moran Towing of Charleston Phone: (843) 529-3000

2. Response Coordination

a. General

(1) The principles of NIMS ICS will be applied to all responses. Regardless of the specific scenario, when the severity of the incident requires the full scope of this plan to be implemented, an Incident Command (IC) or UC system will be initiated by all responders.

(2) If the event is deemed significant Sector Charleston will activate their Incident Management Team (IMT) immediately. The IMT will utilize the National Incident Management System (NIMS) Incident Command System (ICS) to manage the response. The IMT will use the Planning “P” process to assess and update the IAP as needed to address any threat, incident, change or damage to the port’s Maritime Transportation System (MTS).

b. Notifications

(1) Charleston County “Redbook” Standard Operations Guide (SOG) and the Coast Guard Sector Charleston “Marine Casualty” QRC are included as Section 7, “Marine Incident Notifications” of this plan.

(2) The prompt notification of the responsible fire department is the most important step in mobilizing the necessary response from all quarters. Notification for moored vessels and facilities is generally accomplished most effectively through the county or city dispatch system administered by the fire or police department. The major avenue available to the marine community for vessels at sea or anchored to report emergencies is channel 16 VHF-FM (156.8 MHz). This frequency is monitored continuously by Coast Guard Sector Charleston.

(3) The responsible fire department will consider notification of other emergency and law enforcement agencies and personnel as the level of the disaster indicates in accordance with the South Carolina Standard Operating Procedures. At a

minimum, all members of the MIRT should be notified at the earliest opportunity. A major advantage, besides immediate notification to firefighting personnel, is that it alerts local hospitals and EMS services on the network.

c. Fire Control Plan

(1) All commercial cargo vessels store in a prominently marked watertight containers outside the deckhouse on the main deck, where all access the vessel.

(2) General Arrangement Plans shall be permanently exhibited for the guidance of the ship's officers, showing clearly for each deck the control stations, the various fire sections enclosed by "A" class divisions, the sections enclosed by "B" class divisions together with particulars of the fire detection and fire alarm systems, the sprinkler installation, the fire-extinguishing appliances, means of access to different compartments, decks, etc., and the ventilating system, including particulars of the fan control positions, the position of dampers and identification numbers of the ventilating fans serving each section.

(3) International Shore Connections is a standard dimension set of flanges and a coupling to provide a standard US 2 ½" connection to the vessels fire main system.

3. Shipboard Fire Fighting Systems

a. For large commercial vessels, determine available fire fighting systems by consulting the Fire Control Plan located on the main deck and on both the port and starboard sides of the superstructure. The Coast Guard representative on-scene can assist with locating the Fire Control Plan.

b. Fixed Fire Fighting Systems - The fire main system is the primary shipboard tool for vessel fire fighting. The two basic designs are the single main and the looped main. The looped main is more advantageous because damaged portions of the system can be isolated without disrupting service beyond the damaged section. Water pressure is provided by onboard fire pumps. The number of pumps will depend upon the vessel's tonnage. Generally a vessel will have two pumps, a primary pump dedicated to supplying the fire main and a reserve pump which may also supply the sanitary, ballast, bilge, or general service system.

c. Water Sprinkler Systems - The primary roles of sprinkler systems are structural protection and maintenance of escape routes, and are either automatic or manual. Automatic systems are typically maintained under pressure and may be heat activated. Hazards associated with water sprinkler systems are the possibility of flooding and the subsequent degradation of ship stability.

d. Carbon Dioxide and Nitrogen – Used in bulk for fire suppression in machinery spaces and cargo holds. The use of bulk carbon dioxide or nitrogen, which are both inert

non-toxic gases capable of suppressing most cargo fires, offers several major advantages over other more widely used agents, including:

- (1) Minimum hull and cargo damage;
- (2) Reduce need for fire fighter entry and exposure;
- (3) Elimination of stability hazard;
- (4) Rapid temperature reduction within the space; and
- (5) Application requires much less commitment of fire department personnel and apparatus, compared to other available fire suppression methods.

e. It is effective for all cargo fires in ship spaces where the gas can be reasonably confined to the hold on fire, except where the cargo includes substances which generate their own oxygen in the combustion process (such as nitrates, nitrocellulose, etc.). When properly applied, it is particularly effective on fires in tightly packed baled fibers, such as cotton, that would otherwise require vast quantities of water for full control. The following guidelines will help to assign responsibilities in advance:

- (1) **NOTE** – If a shipboard fire fighting system has been discharged, determine what spaces were discharged to and whether or not all agent was discharged. Do not open access ways or ventilation systems to those spaces unless absolutely necessary (life safety, application of additional agent) or otherwise agreed upon by the unified command.

f. The local supplier of bulk carbon dioxide or nitrogen is Sunox Inc. Emergency service: 1-866-365-8127. Response time will be from 2 to 6 hours or more.

4. Concerns Specific to Marine Fire Fighting

a. Vessel Stability, Water Discipline and Dewatering

(1) Vessel stability during firefighting efforts is a constant and major concern as it is entirely possible to sink or capsize even the largest vessel with fire fighting water. A simple rule, though not always practicable, is "water in, water out".

(2) If at all possible, other means of maintaining stability include moving fire fighting water to the lowest levels possible, using minimal amounts of fire fighting water, and having the vessel ballast down if possible. In any event, a vessel's list, regardless of type, must be monitored for changes. The unified command may determine that offensive firefighting efforts may have to be slowed or even stopped to take corrective actions to preserve the stability of the vessel. In such cases, efforts should include removing fire fighting water from the vessel and returning to an even keel condition before resuming firefighting efforts. **The U.S. Coast Guard's Salvage Engineering Response Team (SERT) (202) 475-3400 should be consulted for technical advice on stability, flooding and dewatering.**

b. Fire Fighter Fatigue

(1)Due to vessel design and construction, fatigue is a major factor in vessel fires. Though the numbers and types of equipment on scene may be sufficient to combat the fire, personal fatigue will require crew rest periods or relief. A large facility fire may last several days and the Incident Commander must consider fatigue.

c. Air Supply

(1)Due to the construction and design of ships, self-contained breathing apparatus (SCBA) air usage will be higher than normal. The Incident Commander should consider having additional SCBA bottles brought to the scene and providing a means to refill bottles near the scene.

d. Vessel Access

(1)Moored vessels generally have only one narrow step type gangway for access and egress, which might be blocked by fire. The Incident Commander should establish a second means (i.e. Aerial Ladder) and designate one for access and one for egress, or two Aerials if the gangway is unusable. Anchored vessels present special problems and will require arrangements for safe fire fighter access and egress on the first response.

5. Response Organization

a. Command Post

(1)A Command Post will be established near the scene of the fire. The Incident Commander will operate from the Command Post and insures positive control of the firefighting efforts. If additional resources are called, the Incident Commander should establish a Staging Area where those resources are cued and then dispatched to specific missions. The COTP will integrate resources into the existing structure.

b. Incident Command (IC)

(1)By definition, is the individual responsible for all incident activities, including the development of strategies and tactics. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

(2) In a marine fire, the Incident Commander is the responding fire chief in whose jurisdiction the fire occurs. Assisting MIRT members will report to and follow the direction of the Incident Commander. Assisting agencies are encouraged to do likewise and adapt their organizations to the existing on-scene organization to minimize confusion and ensure the integrity of the chain of command.

c. Unified Command (UC)

(1) In A Marine Fire fighting Incident, it is very likely that a Unified Command (UC) will be organized. To be a member of the UC members must have authority and jurisdiction. UC members may also include agencies, organizations or private industries bringing large amounts of tactical and support resources to the table.

(2) UC is responsible for overall management of the incident. UC directs incident activities, including development and implementation of overall objectives and strategies, and approves ordering and releasing of resources. UC is not a “decision by committee”.

(3) The “Principals” are there to command the response to an incident. Time is of the essence. UC should develop synergy based on the significant capabilities that are brought by the various representatives.

(4) There should be personal acknowledgement of each representative’s unique capabilities, a shared understanding of the situation, and agreement on the common objectives. With the different perspectives on UC comes the risk of disagreements, most of which can be resolved through the understanding of the underlying issues. Contentious issues may arise, but the UC framework provides a forum and a process to resolve problems and find solutions.

(5) The need for UC is brought about when an incident impacts the jurisdictional or functional responsibility of more than one agency. As a component of ICS, the UC is a structure that brings together the “Incident Commanders” of all major organizations that have jurisdictional responsibility for the incident to coordinate an effective response while carrying out their own agencies jurisdictional responsibilities.

(6) UC links the responding organizations to the incident and provides a forum for these agencies to make consensus decisions. Under UC, the various jurisdictions and/or agencies and non-government responders may blend together throughout the organization to create an integrated response team.

(7)The need for UC arises when incidents:

- (a) Cross geographic boundaries (e.g., two state, count or municipal boundaries);
- (b) Involve various governmental levels (e.g., federal, state, local,);
- (c) Impact functional responsibilities (e.g., Search and Rescue, fire, oil spill, EMS); or
- (d) Some combination of the above.

(8)A typical Unified Command for a Marine Fire Incident would consist of;

- (a) Responsible Fire Chief,
- (b) Coast Guard Sector Command Representative
- (c) State agencies, organizations or private industries bringing large amounts of tactical and support resources
- (d) Vessel Master or owner/operator
- (e) Waterfront Facility Operator
- (f) This does not diminish or usurp the authority and responsibility of the responding Incident Commander for the firefighting aspect of the response. It merely recognizes the potentially broader port safety issues involved in these disasters.

d. Response Procedures

(1)The fire department within whose jurisdiction the fire lies will assume responsibility for the firefighting effort, designate the Incident Commander, and establish a Command Post, Staging Area, and Traffic Plan, as required.

(2)Technical advisors shall be assembled at the Command Post. Senior representatives from assisting departments or agencies shall be consulted to best determine options and methods of a coordinated effort and to develop the best plan for future activities.

(3)The COTP will establish safety/security zones on the waterway and establish Harbor Traffic Control, as necessary. Shore side security and safety control at facilities is the responsibility of the facility manager and local police departments, subject to COTP requirements.

(4)Initial Response priorities:

- (a) Establish strategic goals and objectives of response.
- (b) Identify an appropriate safety zone and security perimeter.
- (c) Coordinate with Charleston County Emergency Operations Center (EOC).
- (d) Contact responsible persons for information and assistance.
- (e) Obtain vessel/facility information.
- (f) Determine required vessel movements.
- (g) Determine need for firefighting anchorage/pier.
- (h) Determine need for pollution response.
- (i) Provide info on vessel arrangement and firefighting systems, review vessel plans if available.
- (j) Review vessel stability; communicate w/ Navy SUPSALV or CG Marine Safety Center, as necessary.

(5)CG Marine Inspectors and response teams will be assigned to the IC as liaison officers to provide technical expertise in shipboard; marine firefighting systems, ship fire fighting capabilities, environmental considerations, and other areas of CG special expertise.

6. Communications

a. Marine Communications

(1)The Coast Guard will enforce marine circuit discipline.

(2)Operations

- (a) VHF FREQUENCY
- (b) 157.04 (channel 81A) Primary for all Coast Guard and commercial vessels involved with firefighting or pollution control, municipal vessels shall be capable of using this frequency.
- (c) 157.175 (channel 83A) Secondary frequency.

(3) Vessel Traffic Control

- (a) VHF FREQUENCY
- (b) 156.65 (channel 13) Primary Harbor Traffic control.
- (c) 157.1 (channel 22A) Secondary Frequency.

b. Shore Communications

(1) The on-scene frequency for shore side communications will be that of the responding fire department. All assisting fire departments will use the Charleston County 800 MHz System will use one of the designated mutual aid channels or all units may use the responsible departments talk group. The Incident Commander will designate the 800 MHz group used if not already set forth by mutual aid agreement.

7. Positioning of Vessel on fire:

a. Vessel Fire at Pier

(1) For pier side vessel fires, within fire department jurisdictional limits, the following coordinated actions will be undertaken:

- (a) Establish Unified Command with Fire Department having jurisdiction as the lead agency.
- (b) The Fire Department will be responsible for fighting the fire; the Coast Guard is responsible for port safety, security and environmental protection. The Coast Guard will set safety zones to ensure public safety.
- (c) The Fire Department IC will request mutual aid assistance, if necessary. Federal assistance should be requested through the COTP.
- (d) The Coast Guard will provide waterside safety and security.
- (e) A Sector Coast Guard Marine Inspector will be assigned to the IC as a liaison officer to provide technical expertise in shipboard; marine firefighting systems, shipboard fire fighting capabilities.

(2) Possible Firefighting Piers

- (a) When directing vessel movement to affect firefighting response, the Unified Command must consider the best combination of pier structure, access for shore side fire fighters and their equipment, vessel traffic at or near the pier, and distance to be covered.

(b) Generally, the most desirable piers would be of completely concrete construction, have a wide open apron with no warehouses close to the berths, have fixed firefighting capability to include pressurized hydrants, be well away from navigable channels, and have at least two means of access for heavy vehicles.

(c) Veterans Terminal (Pier Zulu), in North Charleston, located on the Cooper River meets most of these requirements.



(d) As some of these factors, particularly distance and traffic are situation dependent, appropriate and alternate piers should be decided upon after consultation between the COTP and the IC, harbor pilots and facility owner/operators.

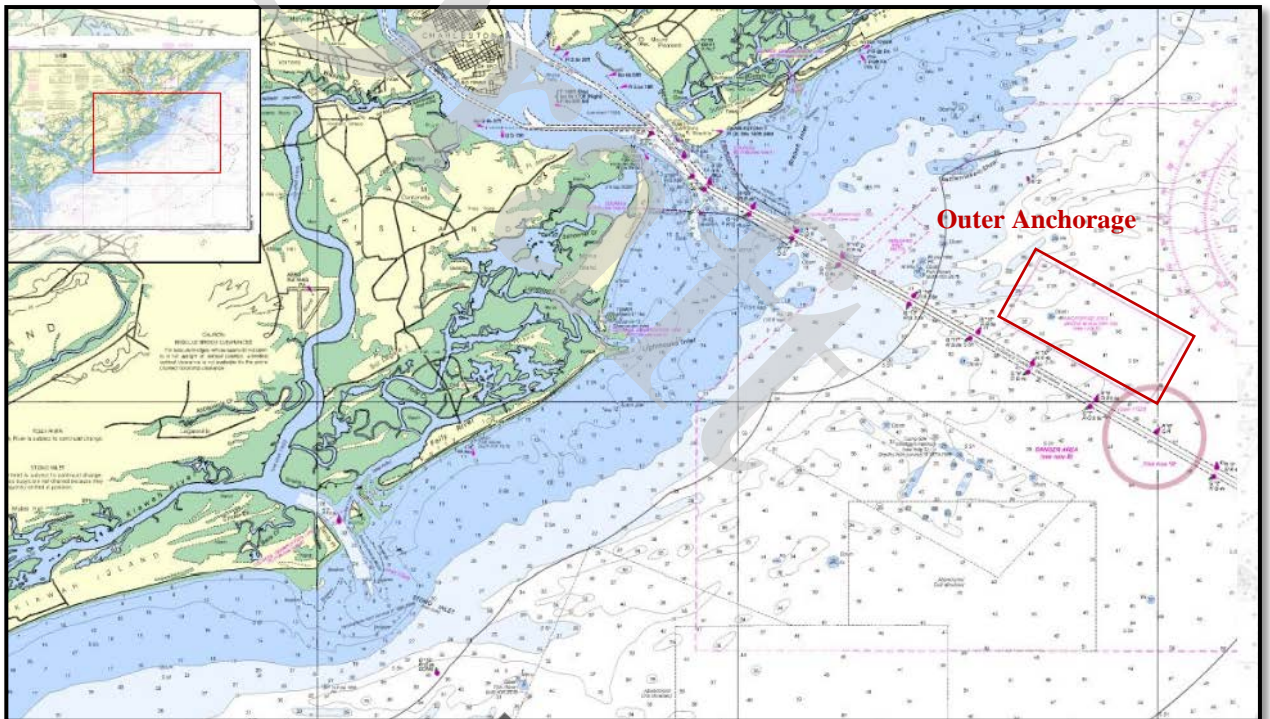
(e) In the event of a fire on a vessel, underway within the port area, efforts will be made to dock the vessel to facilitate firefighting efforts. After consultation among Coast Guard, Fire Department and Port Officials if it is decided docking the vessel is not feasible, the vessel will be directed to a suitable offshore anchorage. While the vessel is underway the IC is the COTP. Once at pier side the IC shifts (with concurrence of the COTP and the local fire department) to the local fire department.

b. Vessel Fire Offshore

(1)The pre-selected firefighting anchorage for a vessel arriving to the Port of Charleston is in the vicinity of the Outer Anchorage as shown on NOAA chart number 11524.

(2)Subsequent to successful search and rescue operations, the primary concern with offshore vessel fires is the protection of the navigable waters in support of the Marine Transportation System. If the vessel is unable to enter port or is denied entry, efforts will be made to secure firefighting technical support and operational assistance as indicated in the Vessel Response Plans (VRP) and Vessel Salvage Plans, all commercial vessels are required to have onboard. These plans require owner/operators of commercial vessels to contract for and designate professional salvage and/or maritime response companies to respond to any potential event on their behalf.

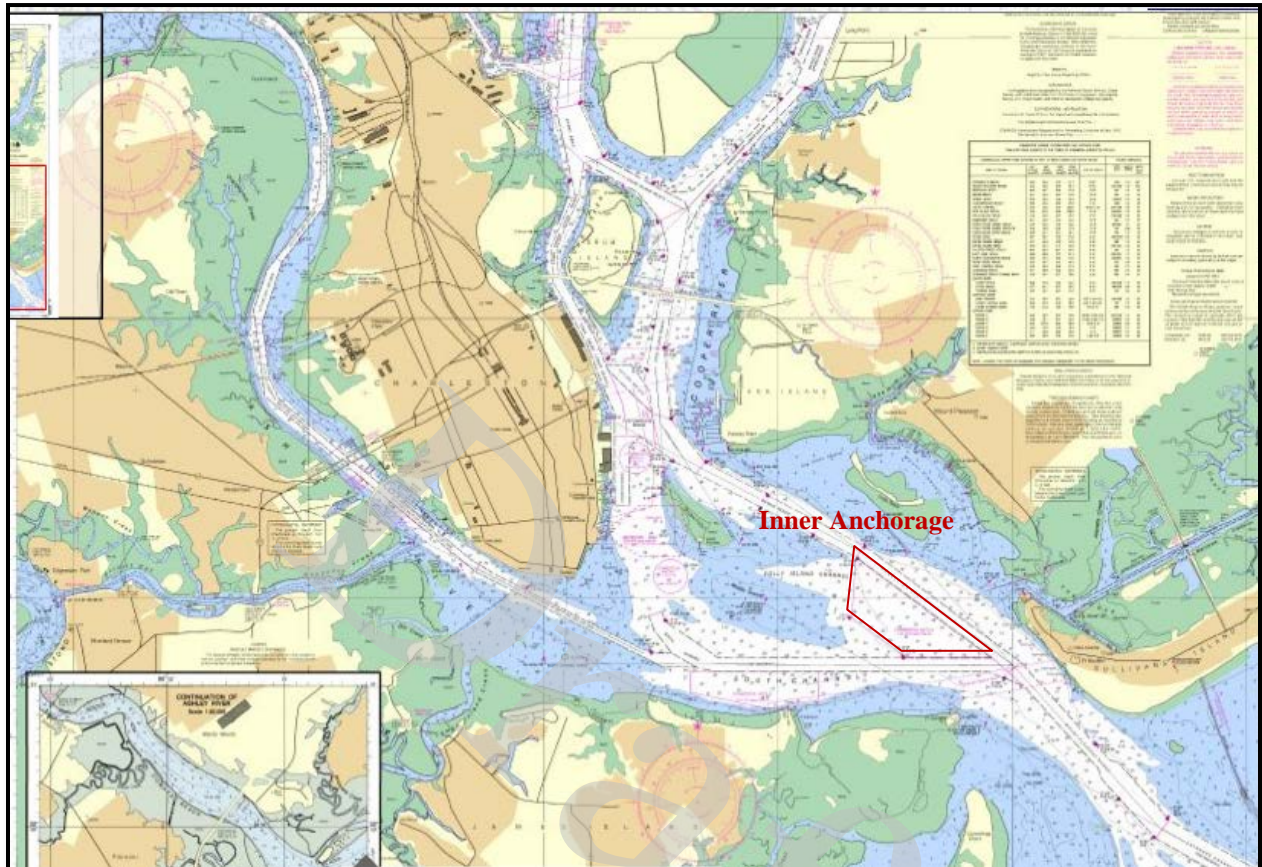
(3)The next consideration would be to consult with the responsible party to determine the need for contracting a commercial firefighting company.



c. Potential location for Intentional Grounding of a vessel

(1)The Inner Anchorage is an area that could be used in an emergency, such as a vessel fire, to intentionally ground a vessel in an effort to save it. This anchorage is no longer in use and has silted in to a depth of approximately twenty feet, making this area an ideal location for intentional grounding.

(2) Any decision to intentionally ground a vessel must be made by the COTP, in consultation with; the vessel master, the Army Corp of Engineers, Pilots Association and other federal and state agencies.



(3) Permitting Burning Vessel Movement/Entry

(4) The COTP, in consultation with the responding fire department and Incident Commander, ship's owner or Master, technical advisors, and Pilots, may direct the movement of a burning vessel to a location which will minimize the impact to the port, other vessels, waterfront facilities, and inhabited areas, and also provide the best location to stage firefighting efforts. The Coast Guard will manage other marine traffic as necessary during burning ship movements and may establish and enforce safety zones as described below. The COTP should also plan for assuming Incident Commander and activating the UCS should the movement precipitate shifts in fire department jurisdictions.

(5) Before entry into the port area or movement within the port is permitted by the COTP, the vessel should be examined by response personnel designated by the Unified Command in order to determine its condition.

(6) Note: requests for entry into the port by a burning vessel under declaration of "**force majeure**" should be evaluated under the same criteria.

(7) Permission for entry or movement may generally be granted when:

- (a) The fire is already contained or under control.
- (b) A greater possibility exists that the fire may be extinguished with equipment available in port.
- (c) All appropriate parties, including pilots, Port Officials, and state/local governments have been consulted.

(8) Action checklist:

- (a) The COTP must approve any movement/entry.
- (b) Identify status of shipboard firefighting equipment.
- (c) Identify class/nature of cargo.
- (d) Recognize possibility of explosion.
- (e) Consider vessel maneuverability (i.e., dead ship, etc.).
- (f) Identify mooring, anchorage/grounding sites.

(9) Denial of Vessel Entry/Movement

- (a) Entry into a port or movement within a port is denied when:
- (b) The vessel is likely to sink/capsize, becoming obstruction to navigation.
- (c) Unfavorable weather conditions preclude safe vessel movement or would hamper firefighting efforts (high winds, fog, strong currents, etc.).
- (d) There is danger of the fire spreading to other port facilities/vessels.

8. Response Resources

Terminal Location	Cognizant Fire Dept.	
Columbus St. Terminal and Union Pier Terminal	Charleston Fire Dept. 843-724-7386	843-720-1981
North Charleston Terminal	North Charleston Fire Dept. 843-554-5700	
Wando Terminal	Mt. Pleasant Fire Dept. 843-884-0623	
Port Authorities/Managers		
Columbus St. Terminal	843-727-4387	843-727-4114
North Charleston Terminal	843-529-9695	843-529-0341
Wando Terminal	843-881-3412	843-881-9093
Union Pier Terminal	843-723-8651	
City of Charleston		
Fire Department	843-720-1981	843-577-7070
Police Department	843-577-7434	843-577-7434
City of North Charleston		
Fire Department	843-554-5700	843-745-1015
Police Department	843-554-5700	843-745-1015
EMS	843-745-4000	
Town of Mt. Pleasant		
Fire Department	843-884-0623	843-884-0623
Police Department	843-884-4176	843-884-4176
Charleston County		
Emergency Preparedness	843-202-7400	843-202-7400
Emergency Medical Services	843-202-6700	843-745-4000
Coroner	843-746-4030	
Sheriff	843-202-1700	
Red Cross	843-764-2323	(24 hours)

Berkeley County

Emergency Preparedness	843-719-4234
Emergency Medical Services	843-719-4234 Ext 4180
Coroner	843-719-4234 Ext 4566
Sheriff	843-719-4334 Ext 4465
Red Cross	843-764-2223

Georgetown County

Emergency Services	843-545-3213
Emergency Medical Services	843-545-3646
Coroner	843-545-3056
Sheriff	843-546-5102
Red Cross	843-546-5422

State of South Carolina

Emergency Preparedness	803-734-8020	800-811-8045
S.C. DNR	843-953-9307	
DHEC	843-724-5800	843-253-6488
Highway Patrol	843-740-1650	
SLED	803-758-6000	803-737-9061
State Ports Authority	843-723-8651	
S.C. SPA Police	843-577-8665	
S.C. SPA Harbor Master	843-577-8192	

Federal

National Weather Service	843-744-3207
FAA	843-747-5285
ICE	800-973-2867
CBP	843-724-4312
FBI	843-722-0135
U.S. Marshal	843-724-4255

Military

USCG Sector Charleston	843-724-7600
USCG Georgetown	803-546-2742
Charleston Air Force Base	843-566-6000
Army Corps of Engineers	843-724-4675
Naval Weapons Station	843-764-7639

Airports

Charleston Int'l Airport	843-767-1100
Charleston Executive Airport	843-559-2401
East Cooper Regional	

Hospitals

Roper North	843-744-2110
St. Francis Xavier	843-577-1000
Charleston Memorial	843-577-0600
Medical University	843-792-2300
Roper	843-724-2000
Trident Regional	843-797-7000

Non-Governmental

SCE&G	843-554-7234	843-745-6000
Southern Bell	843-780-2800	
CSX Transportation	800-232-0146	
Southern Railway	843-566-8051	
Sunox Inc.	843-554-6261	

Oil Companies

Kinder Morgan	843-296-1272
Amerada Hess	843-554-1581
Amoco	843-884-6151
BP	843-722-3858
SCE&G	843-553-8672
Chem Marine	843-554-5275

Marine Chemists

Mr. David Miller	843-821-4922
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Industrial Hygienists/Toxicologists

Azimuth Inc.	843-553-9456
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Tug Companies

McAllister	843-577-6449 (24 hour)	
Moran	843-577-6556 (24 hour)	843-529-3000
Stevens Towing	843-889-2254	

Pilots Association

Charleston	843-577-6695
Charleston Docking Pilots	843-577-6556

Salvage Companies

Eason Diving & Marine Contr.	843-547-0548
McAllister Towing	843-577-6449 towing only
Moran Towing	843-577-6556 towing only
Charleston Heavy Lift	800-868-6946

Naval Architects

M. Rosenblatt & Son	843-744-1686
Engineering Visions Inc	843-744-9828

****Charleston County EMD maintains a list of all available maritime response assets****

Draft

9. Marine Incident Notifications

a. Charleston County “Redbook” Standard Operating Guide:

b. Marine Incident Response Guidelines

(1)Response

(2)Search and Rescue (SAR): SAR missions include incidents such as; missing or late watercraft, sinking water craft, drowning, diving accidents, flare sightings, missing persons on beaches, waterways and other water related emergencies where a life may be at risk.

(a) U.S. Coast Guard Sector Charleston 740-7050

(b) Charleston County Consolidated Dispatch Center 202-1700

(c) Jurisdictional Law and Fire Departments (where applicable)

(d) S.C. DNR 800-922-5431

(e) USCG will notify boats in the vicinity to assist if possible via VHF & 800.

(f) Sheriff’s Office Marine Patrol will coordinate with other law enforcement marine patrol assets. These agencies may have units at or near the incident location and could assist or have information.

c. Oil/Hazardous Materials in Marine Environment:

(1)USCG Sector Chasn 843-740-7050

(2)SC DNR 800-922-5431

(3)SC DHEC 843-253-6488

(4)Fish Kills or Beached Wildlife, such as Whales, Dolphins, Turtles:

(5)NOAA 843-961-2925 (Mammals Only)

(6)SC DNR 800-922-5431

(7)DHEC 843-253-6488

d. Fish and Game Violation:

(a) S.C. DNR 800-922-5431

(b) Boating Accidents:

(c) U.S.C.G. Sector Chasn 843-740-7050

(d) S.C. DNR -800-922-5431

e. Should there be a situation involving any of these circumstances and you are not sure if these agencies should be called, please call them and let them make the decision as to whether or not they need to respond.

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10. Coast Guard Sector Charleston Marine Casualty (QRC)

SECTOR Role: Port Safety/Vessel Traffic Safety

COMMENTS: When a vessel is involved in a marine casualty, the initial concern is personal safety. The next priority is vessel stability, followed by pollution mitigation and ensuring the casualty has not resulted in a navigational hazard.

MARINE CASUALTY. A marine casualty or accident includes any intentional/accidental grounding, or any occurrence involving a vessel which results in damage to the vessel's apparel, gear, or cargo or injury or loss of life of any person. Types of marine casualties include collisions, stranding, grounding, heavy weather damage, fires, explosions, failure of gear and equipment, and other damage that may impair the seaworthiness of a vessel.

REPORTABLE MARINE CASUALTY. Immediately after addressing the resultant safety concerns the owner/operator shall notify the OCMI whenever a vessel is involved in a marine casualty consisting in:

- 1) Loss of life.
- 2) Injury requiring professional medical treatment beyond first aid.
- 3) Unintended Grounding.
- 4) Unintended allision with a bridge.
- 5) An intended grounding or bridge allision that causes a hazard to navigation, the environment, or personnel safety.
- 6) Loss of main propulsion, steering, or reduction in maneuverability of the vessel.
- 7) Unseaworthiness due to fire, flooding, failure of fixed fire fighting, lifesaving equipment, generators, or bilge system.
- 8) Property damage estimated in excess of \$25,000.

SERIOUS MARINE INCIDENT: Any marine casualty or accident that occurs upon the navigable waters of the U.S., or any casualty or accident wherever involving a U.S. vessel which is not a public vessel (owned by the U.S.), and results in any of the following:

- 1) One to five deaths.
- 2) Injury to one person resulting in fractured bones (other than fingers, toes, or nose), loss of limbs, severe hemorrhaging, severe muscle, tendon, or internal organ damage or hospitalization for more than 48 hours.
- 3) Damage to property estimated in excess of \$100,000.
- 4) Actual or constructive total loss of any inspected vessel.
- 5) Actual or constructive total loss of any self propelled uninspected vessel (including fishing vessels) 100 gross tons or more.
- 6) A discharge of 10,000 gallons or more of oil from a vessel in commercial service.
- 7) A discharge or release of a reportable quantity of hazardous substance from a vessel in commercial service into U.S. navigable waters or into the environment of the U.S.

MARINE CASUALTY (continued)

MAJOR MARINE CASUALTY: Any marine casualty or accident that occurs upon the navigable waters of the U.S., or any casualty or accident wherever involving a U.S. vessel which is not a public vessel (owned by the U.S.), and results in any of the following:

- 1) Six or more deaths.
- 2) The loss of a mechanically propelled vessel of 100 or more gross tons.
- 3) Damage to property initially estimated at \$500,000.
- 4) Serious threat to life, property, or the environment by hazardous materials.
- 5) Potential or actual medium/major spills.
- 6) * If the casualty involves a public (including CG) and a non-public vessel and at least one fatality or \$75,000 in property damage.
- 7) The casualty is a major marine casualty if it involves significant safety issues relating to Coast Guard safety functions.

A Major Marine Casualty that meets the critical incident reporting standards should be reported to 1800-DAD-SAFE within 5 minutes of the notification time. See action checklist below.

* Note: Upon receipt of information concerning any casualty involving a public vessel and a non-public vessel notify COMDT (G-MAO) via FLAGPLOT.

INITIAL INFORMATION

Date/Time of Report _____ Received by _____
 Notified by _____ Phone _____
 Marine Casualty Type (see reportable marine casualty list) _____

	VESSEL 1	VESSEL 2
Vessel Name:	_____	_____
Vessel Type:	_____	_____
Call Sign/Flag:	_____	_____
Tonnage/Length:	_____	_____
Cargo/Quantity:	_____	_____
Agent/Phone:	_____	_____
Location:	_____	_____
Lat/Long:	_____	_____
Capable of maneuvering?	Yes/No	Yes/No
Able to anchor?	Yes/No	Yes/No
Injuries?	Yes/No	Number injured _____
Description of Incident	_____	

MARINE CASUALTY (continued)

Is Vessel: Loaded/Light/Ballasted

CARGO TYPE

QUANTITY

Pollution: Yes/No (If yes complete oil spill QRC)

Hazard to navigation: Yes/No (If yes complete hazard to navigation QRC)

DAMAGE INFORMATION

Description of Damage

Is Vessel capable of maneuvering? Yes/No Able to Anchor? Capable/Incapable
Resources on scene Tug en route/on scene? Yes/No
Weather on scene

ACTION LIST

CDO shall:

If a Major Marine Casualty that meets the standards for critical incident reporting, SDO should IMMEDIATELY call 1800-DAD-SAFE in accordance with COMDTINST 3100.8A. Standards include a significant accident involving critical infrastructure or key assets, port complexes that significantly disrupts operation of the maritime transportation system or movement of significant vessels.

If a Recreational Vessel Casualty immediately notify SC DNR. They are the cognizant investigative authority unless they feel it is beyond the scope of their investigative ability or if the incident occurs beyond the 3 mile state boundary.

For a reportable marine casualty notify the SIO (also WWM / Facility Duty Personnel if Regulated facility is involved)

Notify Duty Inspector/Investigator or Commercial Fishing Vessel Examiner (843-296-5526), if a fishing vessel is involved.

Notify Inspections Division Chief.

Ensure the Duty I.O. gathers the minimum damage information stated above.

If a Serious Marine Incident or Major Marine Casualty immediately direct the marine employer to ensure that drug and alcohol testing is conducted on all involved parties.

If there is any concern that the marine employer will not or can not comply, seek assistance from Sector Charleston or local law enforcement to have the drug and alcohol testing conducted. NOTE: Our goal is to have this testing accomplished no later than two hours after the Serious Marine Incident occurs.

Contact Sector Command Center. Request Broadcast Notice to Mariners as necessary.

MARINE CASUALTY (continued)

_____ SIO will advise CO of incident, actions and recommendations.

_____ Brief D7 (cc)(m) (if necessary).

_____ Notify as necessary Pilots, ACOE, and SPA.

_____ Open and complete a MISLE Notification; email to the respective involved Sector Division Chief(s); (i.e. Investigations, Inspections, WWM, etc)

DRUG AND ALCOHOL TESTING FACILITIES

Testing facility for Charleston area:

Coastal Occupational Medicine 744-3500 (after hours pager 529-4039)

3605 Meeting Street Suite D.

Charleston, SC

(One block south of Rivers Ave across from Navy Hospital) (24 chem/alcohol testing. Mariners must be brought to the clinic).

Occupational Medical Services:

ASAP Medical (843) 347-5752 (they're mobile for Alcohol testing)

1261 HWY 501 East

Conway, SC

Take HWY 501 off of HWY 17 N & go East.

Myrtle Beach Medicine (843) 626-4400

1410 S. Kings Highway

N. Myrtle Beach

(1 3/4 miles N. of airport on HWY 17 Business)

ADDITIONAL REFERENCES

- (a) [46 CFR Part 4](#), Marine Casualties and Investigations
- (b) [COMDTINST 16000.10, MSM VOL V](#), Investigations
- (c) [G-MOA Policy Ltr 1-99](#), Post Casualty Chemical Testing Following a S.M.I.