Maryland-National Capital Region Area Contingency Plan (MNCR-ACP)

Marine Firefighting Plan

Annex E

May 2021.3

Record of Changes

Change Number	Change Description	Part Number	Change Date	Name
1				
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1000 Introduction

This section provides guidance for the coordination of marine firefighting activities and associated responders, which may include federal, state, and local government agencies, marine facility owners and operators, vessel owners and operators, commercial entities, and good samaritans. A marine fire may involve one or more vessels, maritime facilities, and any number of lives and cargoes. Fighting a marine fire is complex, and the strategies and tactics employed differ from most urban and wildland fires. If a marine fire incident is not adequately managed, results may include significant loss of life, environmental damage, disruption of maritime commerce, and have a cascading impact on the community.

1100 Scope and Purpose

The purpose of this plan is to:

- Preserve life, limit environmental damage, protect maritime infrastructure, and safeguard maritime commerce in the U.S. Coast Guard Sector MD-NCR Captain of the Port (COTP) Zone, as defined in 33 CFR § 3.25-15, encompasses the State of Maryland and National Capitol Region, as defined in 10 U.S.C. § 2674 (f)(2), including the Upper Chesapeake Bay, tributaries thereof, and Maryland coastline out to 150 miles (see Figure 1),

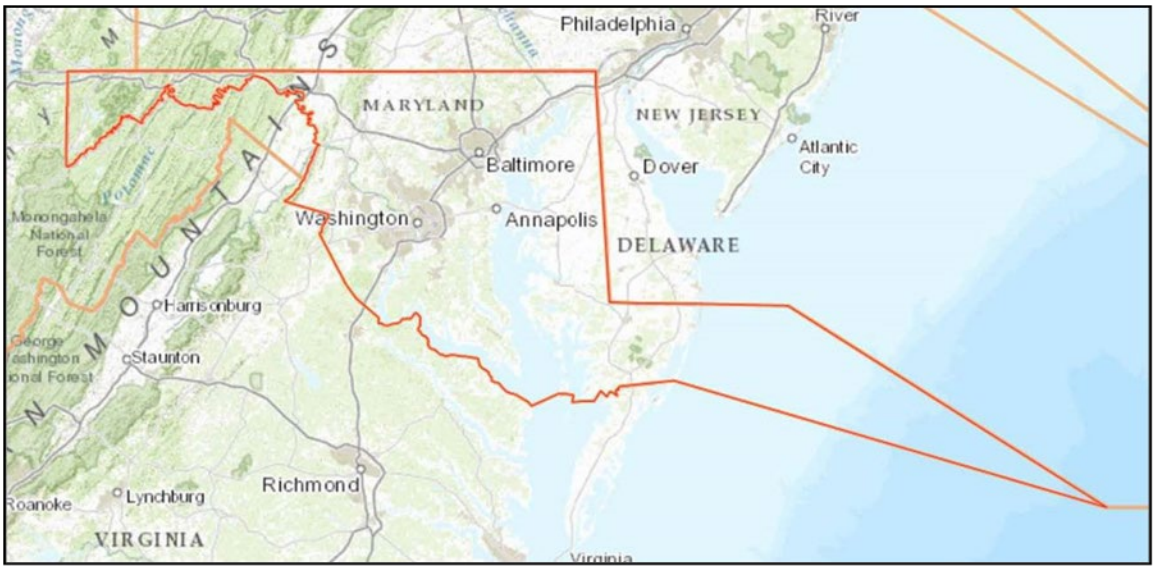

Figure 1

- Establish and facilitate a unified response by federal, state, and local government and commercial responders.

This plan is not a substitute for applicable legal requirements, does not impose legally binding requirements on any party, nor is it meant to be a marine firefighting technical handbook. It is designed for use in conjunction with other federal, state, and local contingency plans.

2000 Policy and Responsibilities

Although the Coast Guard clearly has an interest in fires involving vessels or waterfront facilities the States of Maryland and Virginia, and the District of Columbia are responsible for the coordination of emergency response systems within their jurisdictional boundaries. The Federal Fire Prevention and Control Act of 1974 (PL93-498) states that firefighting is and should remain a state and local function. In accordance with state statutes only certain trained medical, firefighting, and rescue personnel will respond in the event of an emergency.

2100 Federal

The U.S. Coast Guard has no specific statutory responsibility to fight marine fires and does not actively engage in firefighting except in support of a regular firefighting agency under the supervision of a qualified fire officer. However, the U.S. Coast Guard is charged, by the Ports and Waterways Safety Act (33 USC 1221), with the responsibility for safe navigation, protection of waterfront facilities, and protection of the marine environment within his/her area of jurisdiction. This responsibility extends to vessels, their cargo, and their crew, and structures in, on, or immediately adjacent to the navigable waters of the United States. The COTP has the authority, under 14 USC 88 (b), to render aid and save life and property in the event of a marine-related emergency, including fires, within the capability of available U.S Coast Guard's resources.

The Coast Guard's firefighting assistance policy is set forth in the Marine Safety Manual, Volume VI COMDTINST M16000.11 (series). A summary of this policy is as follows: "While it is clear that the Coast Guard has an interest in fighting fires involving vessels or waterfront facilities in or along the navigable waters of the United States or fires in the vicinity of Coast Guard property, this interest does not extend to preemption of local responsibility and authority for firefighting. The involvement of Coast Guard forces in actual firefighting shall be to a degree commensurate with our personnel and equipment levels. The Coast Guard intends to maintain its historic 'assistance as available' posture without conveying the impression that we stand ready to relieve local jurisdictions of their responsibilities. Additionally, the response actions taken shall pose no unwarranted risk to Coast Guard personnel or equipment."

COTP responsibilities for a vessel or marine facilities fire include:

- Search and Rescue.
- Establish and coordinate a Unified Command in accordance with the Coast Guard Incident Management Handbook, COMDTPUB 3120.17 (series).
- Assist in staffing the Incident Command Post.
- Assume operational control of all Coast Guard forces on-scene.
- Establish safety or security zones as necessary.
- Provide information on involved marine facilities or vessels.
- Provide information on the location of hazardous material marine facilities or vessels.
- Provide technical data on ship's construction, stability, and marine firefighting techniques.
- Coordinate the response to an actual or potential oil or hazardous materials discharges.

- Alert owners/operators of terminals or vessels at risk.

2200 State and Local

Municipal fire departments respond to all reports of fire within their jurisdiction, including fires at marine facilities and on vessels. The first municipal fire department on scene will normally provide the initial command structure appropriate for the incident and ensure Sector MD-NCR has been notified. Refer to Appendix B for Marine Firefighting Resources.

2210 Emergency Management Agencies

The State or Local Emergency Management Agency are the agency responsible for coordinating federal, state, local, private resources during emergencies in their respected states. Through their regional and county office, Emergency Coordinators will coordinate the response requests for aid from state or other local authorities upon identification of additional resource requirements.

The State of Maryland Emergency Support Function (ESF) 4 provides for mobilization and deployment, assists in coordinating fire detection and suppression resources and services necessary to support incident response. Provides incident management assistance for on-scene incident command and control operations, and provides incident management assistance for on-scene incident command and control operations. Maryland's ESF 4 primary agency is the Maryland Department of Natural Resources (DNR).

2220 Municipal Fire Departments

County and local municipal fire departments are responsible for fire protection within their jurisdictions. including vessels and marine facilities. Responsibilities of municipal fire departments include:

- Establish and staff a Command Post when serving as an IC and ensure proper Unified Command participation when appropriate.
- Respond with necessary personnel and equipment, including fire boats, specialized technical rescue and hazardous material resources, safety officers and appropriate medical aid.
- Determine the need for, and request additional resources.
- Make all requests for Coast Guard personnel, equipment, and waterside security through the COTP.

If the fire is on a vessel underway in the jurisdictional area of a municipal fire department, which does not have a fireboat or any other shipboard firefighting capabilities, Sector MD-NCR will work with the municipal fire department to locate resources outside that jurisdictional area.

2300 Industry

2310 Marine Facilities

Regardless of other response resources, the owners and operators of facilities retain a fundamental responsibility for providing response resources, information, and ensuring safety and security on site. They must ensure that their fixed firefighting systems are maintained according to established NFPA guidelines. Waterfront facilities regulated by 33 CFR §126, receiving foreign vessels, are required to have an international shore connection.

2320 Vessels

The vessel master is responsible for the safety of the crew and vessel and should initiate firefighting response actions. The presence of local fire fighters does not relieve the vessel master of command or transfer the responsibility for overall safety on the vessel. However, the vessel master should not normally countermand any orders given by the local fire fighters in the performance of firefighting activities onboard the vessel, unless the intended action clearly endangers the safety of the vessel or crew. In accordance with 46 CFR §4.05, the vessel master, must immediately notify the nearest U.S. Coast Guard Sector whenever a vessel is involved in a marine casualty, including fire, after addressing the resultant safety concerns. When the vessel master has determined that the vessel cannot meet the needs of incident, the master must follow the procedures approved in their Vessel Response Plan (VRP).

Vessel Response Plan

- As a provision of the Oil Pollution Act of 1990, all tank vessels carrying oil as cargo and all nontank vessels over 400 gross tons carrying oil as fuel for main propulsion must develop and maintain a VRP. These provisions were codified in 33 CFR §155 Subparts D & J respectively. In addition to general pollution prevention and response procedures, several classes of vessels must also identify salvage and marine firefighting (SMFF) resource providers (see Figure 2).

Vessel Type	Fuel Capacity	Salvage	Emergency Lightering	Firefighting
Tank Vessel	Any	Identified in VRP & Under Contract	Identified in VRP & Under Contract	Identified in VRP & Under Contract
Nontank Vessel	2,500 bbls or greater	Identified in VRP & Under Contract	Identified in VRP & Under Contract	Identified in VRP & Under Contract
Nontank Vessel	Less than 2,500 bbls but greater than 250 bbls	Identified in VRP	Identified in VRP	Identified in VRP
Nontank Vessel	Less than 250 bbls	Identified in VRP	Not Required	Not Required

Figure 2

2330 Salvage and Marine Firefighting Resource Provider

Commercial responder with specialized resources and subject matter expertise who integrates into the incident command structures. 33 CFR 155.4030(b) outline required SMFF services, and the planning response timeline (see Figure 3). Refer to Appendix B for Marine Firefighting Resources.

Service	Location of Incident Response Activity Timeframe		
Marine Firefighting ***Assessment & Planning:***	***At Pier***	**CONUS**: Nearshore area; inland waters; Great Lakes; and **OCONUS**: < or = 12 Miles from COTP City	**CONUS**: Offshore area; and **OCONUS**: < or = 50 miles from COTP City
Remote assessment and consultation	1	1	1
On site fire assessment	2	6	12
Fire Suppression:			
External firefighting teams	4	8	12
External vessel firefighting systems	4	12	18

3000 Command

Upon activation of this section of the Area Contingency Plan, firefighting resources under the direction of the Incident Commander/Unified Command will respond in an appropriate manner to control and extinguish the fire and assume overall responsibility for incident management. Coast Guard assets will be prepared to provide "assistance as available" to the firefighting efforts when appropriate qualified fire service officers are present and able to assume command.

The U.S. Coast Guard Incident Management Handbook (COMDTPUB P3120.17 (series)) offers a detailed explanation into the Incident Commander/Unified Command structure during a marine fire.

3100 Incident Commander

For marine fires, the senior fire service officer present in whose jurisdiction the marine fire occurs will normally serve as the Incident Commander. Based on availability and limitations of agency resources, an agency with jurisdictional authority may elect to transfer Incident Command to an assisting agency or commercial entity who has a greater capacity to respond to the marine fire incident. The COTP shall not assume overall control of firefighting efforts when appropriate qualified fire service officers are present and able to assume command. The COTP maintains the responsibility for the safety of the waterway and adjacent area.

3200 Unified Command

In a multi-agency response, a Unified Command structure should be established. The members of the Unified Command must jointly determine objectives, strategies, and priorities. Within the Unified Command structure, the lead member may shift between agencies for other operations such as search and rescue or environmental protection. A strength of the Unified Command response structure is that multiple authorities, missions, and resources may be leveraged simultaneously for multiple missions and incident objectives. A Unified Command for marine fire incidents will normally include representatives from Federal, State, and local agencies and commercial entities. These representatives may be the COTP, State On-Scene Commander, local fire department, and Vessel/Facility Owner/Operator or their designated representative (see Figure 40).

If there is a threat of an oil spill or hazardous materials release due to a marine fire, the Oil Pollution Act of 1990 and National Contingency Plan requires the Coast Guard to respond and form a Unified Command.

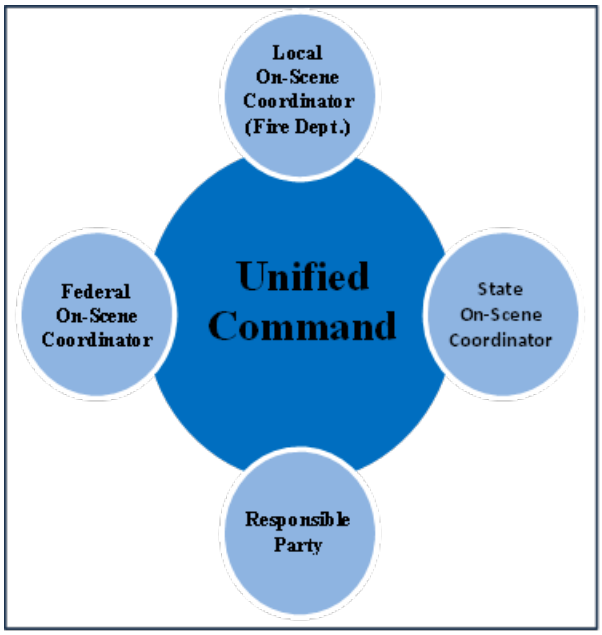

Figure: 3

3300 Incident Command Post

A command post should be established as soon as practicable at a location determined by the Incident Commander/Unified Command. An incident command post command post may be as simple as the tailgate of a fire service vehicle on a pier or berth or formally established at an Emergency Operations Center, Coast Guard base, station/office of the lead responding agency, conference room at a hotel, or other commercial venue. The location of the command post should be communicated to all responding entities when it has been established.

4000 Operations

Initial response operations will be the responsibility of the owner/operator of the vessel or waterfront facility. Owners/operators of vessels and waterfront facilities must develop their own contingency plans to respond to marine fires and limit the spread of fire from their property.
Local firefighting organizations (municipal, industrial, and contractor) must be prepared to respond within the limits of their training and capabilities. If firefighting resources are not trained or capable of handling a marine fire, they can take appropriate measures to prevent the fire from spreading to nearby exposures.

The COTP will provide assistance as available. This may include establishing safety zones, rerouting or restricting vessel traffic, making marine broadcasts, search and rescue or medical evacuation, or pollution response. The COTP will be prepared to continue in the role of Federal On-Scene Coordinator (FOSC) within the Unified Command upon conclusion of firefighting operations to oversee salvage operations or pollution responses.

4100 Initial Notifications/Dispatch

Initial notification of a marine fire may originate through a phone call to the U.S. Coast Guard, a VHF radio call to the U.S. Coast Guard on VHF-FM Marine Band Channel 16 (156.800 MHz), or through

a telephone call to a local emergency 9-1-1 dispatch center. Subsequent notifications by the U.S. Coast Guard Sector MD-NCR Command Center to local response agencies will be made through an Urgent Marine Information Broadcast on channel 16 and by phone. Phone calls to supporting agencies will be made as necessary.

4200 Initial Assessment

The first marine firefighting or U.S. Coast Guard unit on scene shall assume the role of initial Incident Commander and initiate the following.

- Initial scene size up and assessment. An initial assessment shall be transmitted as soon as possible to U.S. Coast Guard Sector MD-NCR Command Center on VHF-FM Marine Band Channel 16 (156.800 MHz) or Channel 22A (157.100 MHz). The initial assessment should include:
    - Type of vessel in distress and description
    - Approximate number of survivors/victims
    - Latitude and longitude
    - On-scene weather conditions
    - additional resource needs
- The first marine firefighting unit on scene shall continue to provide coordination of response operations, including Search and Rescue, until relieved by a more capable unit or directed by the Unified Command.

See Appendix A for SMFF Quick Response Card.

4300 Initial Actions

After the initial assessment, the first arriving unit shall implement the Incident Command System and begin to organize the on-scene operations (e.g., request additional resources, assign search responsibilities, assign perimeter control, etc.) until Unified Command is established to provide the required coordination and direction.

The incident management priorities of life safety, incident stabilization, property conservation, and environmental protection and the operational firefighting priorities of rescue, exposures, confinement, extinguishment, ventilation, salvage, and overhaul are generally the same for shipboard fires and for land structure fires. Marine firefighting specific priorities:

- Selection of a location to fight the fire
- Multiagency accountability and coordination
- Dewatering operations, including control of runoff
- Pollution prevention and control
- Vessel trim and stability
- Logistical issues involving personnel, equipment, and fire-fighting agents

4310 Safety Zones

The COTP may find it helpful to control or restrict vessel traffic in an affected area to help ensure the safety of responders and the general public. All safety zones are established by regulation. 33 CFR

Part 165 sets forth procedures for the COTP to establish Safety Zones for the protection of vessels, water, and shore areas. Temporary Safety Zones issued in response to an emergency, such as a ship fire, are issued as final rules and are effective immediately upon signing.

4400 Marine Firefighting Considerations

Many shipboard fires start in the engine room or accommodation spaces. Oils fuel most engine room and machinery space fires initially, producing hot fires that spread rapidly and require immediate attack. Because accommodation blocks are usually directly above machinery spaces, engine room fires often spread to these spaces, which also contain heavy fuel loads. Cargo fires have different characteristics that depend upon the type of cargo and the ventilation and fire-fighting arrangements. Fires in containers, chemical carriers, bulk cargoes of coal, liquefied gas carriers, and tankers require specialized fire-fighting techniques.

A fire at a marine facility or onboard a vessel at a pier or berth must be fought at the scene. A vessel fire may occur while at anchor/underway away from the resources necessary to combat it or in lower decks limiting the efficiency of firefighting water. However, vessels other than those aground or involved in a collision are generally mobile and may be maneuvered away from further damage and brought to a location to optimizing the fighting of the fire.

Other factors to consider which will play a role in the availability and effectiveness of resources to respond would be:

- **Number of Casualties:** A larger number of casualties will require more search and rescue resources to respond.
- **Complexity of the Disaster or Fire:** The scenario may range anywhere from a large number of people in the water with no associated vessel or aircraft involved to a disaster involving more than one vessel or aircraft plus the possibility persons trapped in a sunken hull or fuselage. A more complex mission will require a more involved response.
- **Time of Year:** Depending on the season in which a marine disaster or fire occurs, the number and type of responding units will vary greatly. The winter months preclude the effective use of search and rescue units and firefighting vessels and restrict a response to larger vessels with steel hulls. Exposure becomes a concern for rescue and firefighting personnel as well as the victims. The use of helicopters may be the only means of actually rescuing personnel when ice formations prevent vessels from reaching the scene.
- **Time of Day:** Night operations greatly impact the ability to locate survivors and fighting a marine fire and increase the risks of navigation to the scene and/or triage locations. It may prevent a timely location of the disaster or fire itself (especially if the fire is confined below decks and flames are not visible).
- **Weather:** Fog, rain, snow, heavy winds, and other types of weather will greatly reduce visibility and could cause a fire to spread. The expediency with which search and rescue units and or firefighting resources can arrive and begin operations.
- **Tides, currents and river/bay conditions:** The tides and currents over the course of the response phase will affect the location and movement of persons, vessels (which have lost

propulsion), or barges (adrift) on the water. The tidal condition may also affect the deck height of a vessel from which persons may have to be lifted off at triage sites and impede the ability of firefighting personnel, both on land and water, to board or depart a stricken vessel. River/Bay conditions will have an impact on the ability of units to reach the disaster and or fire, locate and transport survivors, fight the fire, and contribute greatly to the fatigue of emergency personnel. The response organization must ensure that any emergency response resources dispatched are capable of safely operating in a potentially hazardous environment. In addition, units should be suitably equipped to coordinate activities with the on-scene commander.

- **Pollution:** The presence of oil, fuel, or chemicals in the water may impact access and delay firefighting activities.

- **Other Responses**: Should multiple disasters occur simultaneously (e.g., multi-alarm fire, train derailment, chemical release, natural disaster, etc.), resource availability, hospital space, ambulances, firefighting assets, and response time will all be adversely affected during the response.

- **Delay in Resource Response:** Due to the port's large area response planners and must realize that delay may be encountered in having requested resources on-scene. Any resources determined to be necessary and not immediately at-hand should be requested through appropriate channels without delay. Protracted operations will require relief of first responding units; mutual aid elements may be traveling long distances and/or be delayed due to congestion on travel routes in built-up areas. A particular concern when considering response time is the travel time for larger volume fire boats, foam pumper apparatus along with the logistical support of adequate quantities of foam liquid, carbon dioxide (CO2) gas, and other extinguishing agents in bulk.

4410 Offshore Firefighting Considerations

In addition to the problems associated with any shipboard fire, an offshore incident is further complicated by the poor flow of information and difficulties in supplementing the vessel's firefighting resources. Reports from the vessel may be confusing due to the language difficulties or the simple fact that the crew is too busy fighting the fire to provide detailed information.

Until additional resources can be brought to bear, the vessel's firefighting equipment and crew will be the only resources available. Additional resources in the form of public or private vessels may not be close enough to respond in a timely manner and may be ill equipped to provide significant assistance. Therefore, the farther offshore a burning vessel is the less external aid it shall receive, but the less impact it has on vessel traffic and port operations. The closer to shore or a port a burning vessel is the more aid it is likely to receive, while its impact on vessel traffic and port operations is greater. In both cases, SAR would be Coast Guard's primary response.

4500 Movement of Vessel to Place of Safe Refuge

There is no perfect docking or anchoring site for all vessels and all situations. The COTP has jurisdiction over approving Potential Place of Safe Refuge sites for a vessel in distress. Selection of a Place of Safe Refuge by the COTP in consultation with other agencies and stakeholders will always be made on a case-by-case basis.

4510 Vessel Movement Considerations

A crucial decision in response to a burning vessel is whether to allow it to enter the port, move it to or away from an anchorage or a pier or berth, ground the vessel, or scuttle it offshore. No vessel on fire will be moved without the express permission of the COTP. Various scenarios should be planned to consider the possible outcomes of that decision. The COTP should approach such a situation with the view that the overall safety and security of the port is the key factor. The possibility of a vessel sinking in a channel or spreading fire to other vessels or facilities must be evaluated. Among the considerations to evaluate in deciding whether to allow a vessel to enter or move within a port are the following:

- Hazard to crew or other resources where vessel is situated
- Location and extent of fire
- Capabilities/training of crew
- Status of shipboard firefighting equipment
- Class and nature of cargo
- Possibility of explosion
- Hazards to the environment
- Forecasted weather
- Maneuverability of the vessel (i.e., is it a dead ship, etc.)
- Effect on bridges under which the vessel must transit
- Potential for fire to spread to pier or shore side facilities
- Firefighting resources available shore side
- Consequences/alternatives if the vessel is not allowed to enter or move
- Hazards to other ships or special populations (i.e. schools, hospitals)
- Possibility of major structural failure during transit
- Danger to pilot and tug crews during transit
- Possibility of vessel sinking or capsizing thereby becoming an obstruction to navigation

4520 Vessel Movement Decision Process

The COTP may confer with other federal, state, and local officials when deciding where and when to move a stricken vessel, depending on the situation and time restrictions. Prior to determining if a vessel can be moved or if a place of safe refuge can be used, all options should be evaluated and consequences considered. Options include:

- Vessel remains in the current position (inside or outside the port);
- Vessel continuing its voyage into a port (Place of safe refuge);
- Direct the vessel to continue onto its next port of call (continue voyage);
- Direct the vessel out of port or further offshore;
- Intentionally ground the vessel; or
- Intentionally scuttle the vessel in deep water.

The Incident Management Team (Safety Officer, Environmental Unit, Marine Transportation System Recovery Unit, Operations Section Chief, and Salvage Master) is responsible for fully assessing all the safety, environmental, and economic impacts of all vessel movement considerations (including vessel remaining in place) and for providing recommendations to the COTP. The U.S. Coast Guard Marine Environmental Response and Preparedness Manual, Appendix D, Place of Refuge Risk

Assessment Job Aid (COMDTINST 16000.14(series)) was developed to gather and organize incident specific information and asses risks involved in moving a vessel to a place of safe refuge. Information recorded on the Risk Comparison Worksheet for Responding to Vessels in Peril will be instrumental in this decision process.

4530 Reasons for Denial

Entry into a port or movement within a port may have to be denied when:

- There is danger that the fire will spread to other port facilities or vessels;
- 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 firefighting (high winds, fog, strong currents, etc.); or
- Risk of serious pollution incident by oil or hazardous substances exists.

4540 Places of Safe Refuge Location Considerations

Prior to selecting Place of Safe Refuge location, certain considerations should be taken into account:

- The flammability of pier structures and facilities;
- Availability of adequate water supply;
- Access for response boats and vehicles;
- Minimizing the risk of impeding navigation;
- Location of low risk to facilities or vessels, consistent with minimizing the distance the vessel must be moved.
- Bottom material and formation should not pose an undue risk of rupturing the vessel's hull
- Water depth should be shallow enough that the vessel will not sink below the main deck level, yet deep enough that fireboats, salvage barges, and tugs can approach; and
- Environmental conditions: strong winds or currents may hamper firefighting, salvage, or other response efforts. Tidal influences and river level fluctuations must also be considered.

4600 Operational Firefighting Priorities

- **Rescue:** Personnel safety must always be the first consideration in any fire or emergency situation. When lives are in danger, the Incident Commander/Unified Command 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 protect.
- **Confinement:** The effort to establish control over the fire through impeding the fire's extension to non-involved areas and limiting the fire to its area of origin. To accomplish proper containment, all closures and generally all ventilation (unless personnel are trapped inside the space) should be secured. Establish primary fire, smoke, and flooding boundaries. Primary

boundaries are critical to the control of a fire. Monitor and cool the boundaries, as necessary (if steam is produced when sprayed with a fog pattern, continue to cool the surface), on all six sides of the fire (fore, aft, port, starboard, above, and below).

- **Extinguishment:** Attack and suppression of the main body of the fire. 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. The usage of Shipboard fixed fire suppression systems are usually the best method for extinguishing a fire on a vessel. These systems include:

    - **Fire Main System:** The fire main system is the primary tool for defending the vessel from fire. There are two basic designs of fire main systems, the single main and the looped main. The looped main has certain advantages due to the ability to isolate sections of the system without disrupting service to the stations beyond that ruptured section. Water pressure is provided by on board 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.

      International Shore Connection: *The International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, requires an "international shore connection" to be carried on board all passenger and cargo vessels over 500 gross tons subject to SOLAS, and U.S. inspected vessels of 1000 gross tons or more. This universal coupling, as illustrated and described in 46 CFR 162.034, is designed to connect fire main systems between one vessel and another or between a shore facility and a vessel.*

    - **Water Sprinkler Systems:** Due to construction in accordance with Method I of the Safety Of Life At Sea (SOLAS) convention, this provides for fire protection though noncombustible construction materials, sprinkler systems are not widely used on U.S. merchant vessels in other than accommodation spaces and Roll-On/Roll-Off vehicle decks. The primary roles of the sprinkler system are structural protection and to maintain escape routes. Sprinklers are of two varieties, automatic (wet pipe) and manual (non-detection, deluge). Automatic systems are maintained under pressure and are activated by a fusible link in the sprinkler head while the more common manual systems have an open valve assembly and are supplied directly by the ship's fire main. An important note is that both systems require power for the associated pumps to supply operating pressure, although the automatic system relies upon a pressure tank for its initial dump. The required power source should be available from the vessel's emergency generator if the ship's service generator is unavailable. Hazards associated with water sprinkler systems are the possibility of flooding, and its effect on stability.

- **Carbon Dioxide Systems:** Carbon dioxide is a versatile extinguishing agent as it does not damage cargo, does not conduct electricity, and provides its own pressure for discharge. However, CO2, is only effective if all ventilation and opening to the space are secured. As a smothering agent, CO2 lacks any considerable cooling properties; therefore, the carbon dioxide concentration in the space must be maintained until heat levels in the fire area drop below the ignition temperature of fuel source. Additionally, CO2 poses a significant life threat due to its ability to displace oxygen, causing asphyxiation, even in low concentrations. CO 2 systems are primarily installed in machinery spaces and cargo holds. Discharge is accomplished manually; either remotely by two pull handles outside the affected compartment or by directing the discharge point from the CO2 bottle (high pressure system)/storage tank (low pressure system) room.

- **Halon Systems:** Halon (bromotrifluoromethane) is a colorless and odorless gas, approved by the U.S. Coast Guard for use in machinery space fixed systems on merchant vessels. Halon has extinguishing properties similar to carbon dioxide: it is a nonconductor, very effective against class B and C fires (Halon can be used to extinguish class A fires provided the fire is not deep seated), leaves no residue, is stored as a liquid in cylinders, and does not require an external power source for discharge. Fixed Halon systems require manual activation through two pull boxes located outside the protected space or from the bottle storage space. An evacuation alarm will precede the discharge. Inhalation of Halon will cause dizziness and impair coordination.

- **Foam Systems:** Foam is primarily used to combat flammable liquid (class B) fires. Although foam does possess some cooling properties, it is a smothering agent. Foam is traditionally available in two varieties, chemical and mechanical. Shipboard installation of chemical foam systems is, however, no longer approved by the Coast Guard. Mechanical foam is produced by mixing a foam concentrate with water and then rapidly aerating the resultant solution. The ratio of water to foam concentrate determines the expansion ratio and, therefore, the physical properties of the foam. Foam with a low expansion ratio will be wetter, heavier, more heat resistant (provides a longer lasting blanket), and less affected by wind. These properties, however, also make low expansion foam less adherent to vertical surfaces and more electrically conductive. A lower expansion ratio will also provide better flow around obstructions, making this mixture well suited for service in class B machinery space and tank vessel deck fires. Fixed deck foam systems must be installed on tankers constructed after 1 JAN 1970.

- **Overhaul:** Actions to complete incident stabilization and begin the shift to property conservation. Considerations during overhaul 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), monitor scene to ensure the fire will not re-ignite, determination of the fire's point of origin and source of ignition. Detailed photographic records of the fire scene prior to clearing any debris is highly recommended to aid in post fire investigations.

- **Ventilation:** Ventilation tactics will vary depending upon the location and conditions of the fire. The choice to secure or utilize ventilation will alter the tactics used to combat the fire. Generally, all ventilation on a vessel will initially be secured and all dampeners shut upon receipt of a fire alarm. The purpose in ventilation shutdown is both to decrease the flow of oxygen to the fire area and to begin the containment process. However, this tactic may cause a fire to extend through cableways, false overheads, plumbing, etc. Utilization of ventilation to aid firefighting efforts should not begin until a coordinated attack is staged. For example, ventilation can be used to aid fire fighters in gaining access to and prevent the travel of smoke and other fire gases from the involved space(s) by turning exhaust fans on high and supply fans on low, meanwhile ventilation in spaces surrounding the fire should be positively pressurized with supply fans on high and exhaust fans secured. However, improper use of this method could also result in backdraft conditions.

4700 Vessel Stability Considerations

The stability of a vessel is described as its ability to resist heeling from the upright position at small angles of inclination. The large volumes of water often used combating fires can have a negative impact on vessel stability, jeopardizing the safety of the vessel and the personnel on board. The COTP or their designee may be expected to provide advice regarding vessel stability issues and should command a basic knowledge of the topic. The U.S. Coast Guard Marine Safety Center Salvage Engineering Response Team (SERT) shall be contacted to provide technical guidance on stability issues.

- **Firefighting Factors Affecting Vessel Stability:** The introduction of large amounts of water onto the vessel can create a free surface effect which is particularly dangerous if the water is confined above the vessel's normal center of gravity. Personnel and equipment moving through watertight doors cause potential problems by disrupting flooding boundaries.

- **Stability Effects on Firefighting:** The most important consideration regarding vessel stability is the control of a vessel's list. Problems resulting from a failure to maintain a reasonable degree of transverse stability can include:

    - Poor footing for response personnel,
    - Difficulty in maintaining a foam blanket,
    - Automatic fire door closure problems,
    - Damage/injury from shifting of loose objects,
    - Reduced effectiveness of fixed dewatering suctions and drains,
    - Loss of use of vessel machinery due to sustained excessive list.

- **Vessel Documentation:** Several vessel documents can be useful in determining vessel stability. The most important of these is the vessel's trim and stability booklet. Other useful documents are the cargo, docking, capacity, and general arrangement plans. If this information is for some reason not available on board the vessel, it should be available from the vessel's owner or operator. Note that per 33 CFR 155.240, owners and operators of oil tankers and offshore oil barges shall ensure that their vessels have prearranged, prompt access to computerized, shore based damage stability and residual strength calculation programs. Access to the shore-based calculation program must be available 24 hours a day. Per 33 CFR 155.245, owners or operators of inland oil barges shall ensure that the vessel plans necessary to perform salvage, stability, and residual hull strength assessments are maintained at a shore-based location. Access to the plans must be available 24 hours a day.
- **Water Discipline**: Water is the most prevalent fire extinguishing agent. Water suppresses fire through absorbing heat when converted into steam and the resulting smothering effect as steam displaces the air around the fire. However, the indiscriminate use of water, particularly in vessel fires, can be as dangerous as the fire. In considering the use of water versus other extinguishing agents the questions of potential electrical hazards, the presence of any water reactive materials, and the problems of flooding and the resulting stability issues must be considered.
- **Dewatering:** A vessel will sustain a loss of stability from firefighting water accumulation above the vessel's original water line. For this reason, dewatering is an essential planning issue for successful vessel firefighting.

4800 Strategy and Tactics

Vessel fires require entirely different strategy and tactics than those employed on land-based structural fires. Fire departments should be familiar with National Fire Protection Association 1405, Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires.

4810 General Tactics for Common Vessel Spaces

A shipboard fire will present firefighters with an endless variety of difficulties. To ensure the readiness of the port, local fire departments should be encouraged to periodically accompany Coast Guard marine inspectors on vessel inspections to allow firefighters to become acquainted with the construction, layout, organization, and available firefighting apparatus on board a variety of merchant vessels.

- **Public And Accommodation Spaces:** The first concern in responding to a fire in accommodation spaces is the rescue of victims. The National Fire Protection Association describes a fire in these spaces as being very similar to shore side structural fires. While this description is accurate, it can also be misleading. The vessel's steel construction, below deck locations, and a high content of synthetic materials will raise heat levels dramatically compared to a shore side structural fire.
- **Engine Room And Machinery Spaces:** The engine room refers to the space in which the vessel's propulsion engine is located and machinery spaces refer to the location of the auxiliary systems necessary for the vessel to function. This machinery includes systems such as electricity, hydraulics, sewage, fuel and lube oil, compressed air, and steam systems. A fire in these spaces is easily the most difficult to control and extinguish. Access to an engine room/machinery space fire can be complicated by a maze of catwalks, decks, and gratings that

may be slick with petroleum products. In addition to the vessel's fire plan, the vessel's engineering department can provide invaluable information on the access, layout, and obstructions that are present in these spaces.

Before attempting to attack an engine room fire and utilize the space's fixed system verify:

- All personnel have been evacuated from the space.
- Emergency equipment shutdowns have been utilized.
- Ventilation, power, and watertight doors to the space have been secured.

- **Prior to reentry:**
  - Automatic watertight doors should be set to manual to prevent possible personnel injury and severing of a hose line.
  - Point of reentry should be the lowest possible access point to allow firefighters improved visibility and reduced heat conditions.
  - Should entry from above the fire level prove necessary, ventilation should remain secured until the fire is extinguished to prevent pulling the fire up to the firefighters as they enter the space.

4820 Special Considerations According to Vessel Type

- **Freight Vessels**: Freight vessel cargo holds come in four basic types: dry bulk, break bulk, roll-on/roll-off (Ro/Ro), and container. Each of these present particular hazards to the fire fighter. In general, as with any fire situation, it is very important to know what is burning. This is doubly true of cargo vessels due to the possible variety of goods on board with different characteristics and reactive properties. The vessel's Cargo Manifest and especially the Dangerous Cargo Manifest should be reviewed, if possible, in consultation with the vessel's master. Until the best method of extinguishment, a cargo off-loading site, and overhaul and disposal procedures are identified, the cargo hold should be sealed and the fixed fire suppression system should be activated. Once the fixed fire suppression system is activated, bulkheads temperatures should be monitored hourly to track progress.

  - **Dry Bulk:**
    - Dry bulk holds generally contain goods such as grain, coal, ore, scrap metal, or other particulate matter loaded directly into a hold without packaging; much like liquid in a tanker.
    - The danger associated with a hold full of grain is similar to that of a silo: spontaneous combustion, dust explosions, and product expansion with the addition of water.
    - Cargo holds containing coal may require cargo discharge to extinguish the fire. Coal that is heating spontaneously should be leveled, trimmed, and

packed down tightly in the hold to minimize the chance of fire.
- Scrap metal cargos will probably require that the hold be sealed and inerted while cooling exposures.

- **Break Bulk:**
  - Break bulk is loaded into a vessel's hold as packaged goods in crates, bags, or barrels, etc. The cargo may be supported and separated by dunnage (wood pallets, etc.), which will present additional class A fire hazards.
  - Cargo on break bulk vessels is most commonly loaded vertically into the holds by cranes through a series of large hatches. As subsequent holds are loaded, it is common for cargo to be placed on the hatch to the lower hold.
  - Access to the lower holds can be difficult in these situations, often leaving scuttles and steep ladders as the only method of entry.
  - To aid in preventing the spread of the fire, cargo in holds with adjacent bulkheads should be moved away from the affected hold and the bulkheads should be cooled as necessary.

- **Container:**
  - Containers provide uniform modular handling of packaged and liquid goods. Containers may be stacked on deck or stored in holds. Due to the often large number of containers and the manner of stowage, access to a specific container can be difficult.
  - In order to complete extinguishment and overhaul of the fire, it is best if the container can be removed from the vessel once the fire can be controlled. Both the affected container and those surrounding it need to be externally cooled.
  - If the container is on deck, control of the fire inside a container is often best achieved by determining the required agent for the contents and applying the agent through a small hole high on the side closest to the hottest point.
  - The recommended procedure if the container is in a hold is basically the same, unless the container cannot be reached, in which case the hold should be sealed off and fixed fire suppression system activated.

- **Roll-on/Roll-off (Ro/Ro):**
  - Ro/Ro vessels are generally comprised of several parking garage like decks designed to maximize the storage of motor vehicles.
  - Hulls on some Ro/Ro vessels have a very high freeboard; this height can be sufficient to cause complications in the staging of operations and equipment on the vessel.
  - Access to the cargo decks can often best be established through side

ports and cargo loading ramps. Close storage of cargo will likely cause difficulty in accessing a particular area or unit of cargo.
- It is generally best to activate the fixed fire suppression system in the cargo deck until the fire area can be accessed for a direct attack.

- **Commercial Fishing Vessels:**
  - Fishing vessels comprise a specialized sub-type of freight vessel which includes trawlers, fish tenders, and fish processing vessels.
  - The arrangement of the holds and stowage of catch/cargo often bare similarities to a small break bulk or dry bulk vessel.
  - The hazards associated with these vessels are also similar to other freight vessels often with an addition of a large refrigeration system used to preserve the cargo. The use of a refrigeration system can hold potential hazards to responders due to the use of anhydrous ammonia as the primary refrigerant.

- **Bulk Liquid Tank Vessels:** Today's tank vessels are capable of transporting large quantities of liquid products. Tank vessels can be divided into three categories: petroleum, liquefied gas, and chemical. It is not uncommon for a tank vessel to carry a variety of liquids in its segregated tanks. Deck fires on tankers are one of the most common vessel fire scenarios. The key to control and extinguishment in deck fire situations is to reduce/remove the fuel source by shutting down the cargo system. System shutdown is best accomplished when performed by personnel knowledgeable about the system's operation.

  - **Petroleum:**
    - For petroleum on deck, the best course of action is to employ foam and maintain an unbroken blanket over the entire surface of the exposed product.
    - The placement of fire resistant containment booms around the vessel would be prudent.
    - It is also important to note that under 33 CFR 155.1050 and 33 CFR 155.1052, vessel response plans, required for vessels which carry group I-V petroleum oils, must identify and ensure the availability of a company with vessel firefighting capabilities in the area(s) which the vessel operates. The availability of these pre-planned resources should not be overlooked during a marine firefighting scenario.

  - **Liquid Natural Gas (LNG)/Liquid Propane Gas (LPG):**
    - Natural gas and Propane gas are the two most common liquefied flammable gases. For transport, these gases are liquefied through a cryogenic process.
    - This process results in a significant volume reduction (by a factor of 600 for natural gas and a factor of 270 for propane gas).

- Vessels which transport these gases generally utilize large insulated spherical tanks for product storage.
- The tanks are isolated within the vessel's hull by cofferdams designed to contain low volume leakage from the tanks.
- Vessel's which carry LNG/LPG are fitted with deck water spray systems. The spray system is intended primarily for the protection of exposures (vessel superstructure, storage tanks, and cargo system) from the extreme radiant heat produced by natural and propane gas fires. The spray system will also aid in confinement of the fire area, protection of metal surfaces from embrittlement fractures caused by contact with cryogenic liquids, and the dissipation of unignited vapor.
- In addition to the spray system, most gas carriers will be fitted with a dry chemical system with sufficient agent to protect the weather deck. In the event that hose lines are brought to bear on the fire, high velocity fog may be employed to disperse unignited vapor, but the high velocity fog pattern should never be used directly on the liquid as it will vaporize the liquid.

- **Chemical:**
  - The bulk transport of liquid chemicals has become one of the major commodities shipped by water. Proper identification of the hazards present is the key to responding to any chemical or hazardous material incident.
  - A response strategy cannot be formulated before issues of toxicity, volatility, and reactivity (especially to water and other firefighting agents) are resolved.
  - The integrity of the tanks and cargo system must be maintained. It may be prudent to employ the available fixed systems rather than risk the safety of responders in a direct attack upon the fire.
  - The Incident Commander must also evaluate the necessity to evacuate the scene and surrounding area due to the existence or potential threat of plume development.

- **Passenger Vessels:** Firefighting operations on passenger vessels can be extremely difficult. Public and accommodation spaces on passenger vessels will often present a higher fire load than other vessels because of the quantity of synthetic materials used to enhance the vessel's appearance. Another result of these cosmetic enhancements will be the existence of many void spaces and probably a complex ventilation system which will contribute to the spread of fire and smoke. Large passenger vessels, such as cruise ships, are constructed with a large number of small compartments connected by narrow passageways and ladders. The COTP's shall work with the passenger vessel industry, any port authority, and local response and relief agencies operating in their respective AOR's to ensure the coordination of these parties for the

evacuation of and accountability for the vessel's passengers. An accurate account of persons both ashore and aboard the vessel is critical to ensure successful firefighting and rescue operations.

5000 Planning

The Incident Commander/Unified Command is responsible for organizing and staffing the Planning Section. Staffing should be a combination Coast Guard, other federal/state agencies, vessel or facility, local firefighting, and commercial contractor personnel. The Planning Section is responsible for the collection, evaluation, display, and dissemination of the information about the development of the incident and the status of resources used or needed at the scene.

8510 Initial Situation/Resource Status U.S. Coast Guard Sector MD-NCR Command Center will maintain the Situation/Resource Status (Common Operating Picture) until an Incident Commander/Unified Command is established and the Planning Section is staffed. To facilitate this process and ensure a coordinated response, all responding marine resources, regardless of function or role, shall check in with the Command Center when arriving on-scene via Marine Band Channels 16 or 22A.

5100 Marine Transportation System (MTS) Recovery

For SMFF response operations, the activation of a Marine Transportation System Recovery Unit (MTSRU) or Marine Transportation System Recovery Branch (MTSRB) is essential to the development of incident-specific SMFF plans to minimize MTS disruptions.

The MTSRU/MTSRB will provide essential information to the Incident/Unified Command on MTS impacts, potential MTS impact of planned SMFF operations, coordination with port stakeholders, and operational recommendations to minimize the impacts to the MTS.

The MTSRU/MTSRB is responsible for monitoring the status of the MTS, planning and prioritizing MTS recovery operations, and development of vessel control measures (Safety Zones, Security Zones, vessel decontamination corridors/areas). The MTSRU/MTSRB must also participate in the vessel movement decision process, assessing potential impacts to MTS and identifying possible mitigation strategies.

5200 Environmental

The Environmental Unit is responsible for environmental matters associated with the response; including strategic assessment, oil spill trajectory modeling, identifying natural resources at risk, and environmental monitoring and permitting. Technical Specialists frequently assigned to the Environmental Unit may include sampling, response technologies, trajectory analysis, weather forecasts, shoreline cleanup assessment, historical/cultural resources, and waste disposal. The Environmental Unit also participates in the vessel movement decision process, assessing potential impacts to endangered and threatened species, environmentally sensitive sites, and commercial fishing stocks, and identifying potential mitigation strategies. NOAA Scientific Support Coordinators typically support the Environmental Unit.

6000 Logistics

The Incident Commander/Unified Command is responsible for organizing and staffing the Logistics Section. Staffing should be a combination of Coast Guard, other federal/state agencies, vessel or

facility, local firefighting, and commercial contractor personnel. The Logistics Section is responsible for maintaining the command post and staging area, development of an equipment pool through procurement and mutual aid agreements, communications plan, facilitates equipment re-supply, and coordinates with relief agencies as necessary to operate rest and subsistence services for response personnel.

6100 Initial Logistical Support

Each responding entity will be responsible for their own logistical support using their established organizational procedures until an Incident Commander/Unified Command is established and the Logistics Section is staffed.

6200 Marine Communications

Primary response communications with the U.S. Coast Guard will be via VHF-FM Marine Band radio. Responding units shall make initial contact with the U.S. Coast Guard by calling for "Coast Guard Sector MD-NCR" on VHF-FM Marine Band Channel 16 (156.800 MHz). The Sector MD-NCR Command Center will then direct the responding unit to an appropriate tactical channel. If communications with the Coast Guard on an assigned tactical frequency are lost, the responding unit shall reestablish communication on Channel 16.

Tactical frequencies for Sector MD-NCR include VHF-FM Marine Band Channels 21A (157.050 MHz), 23A (157.150 MHz), 81A (157.075 MHz), 82A (157.125MHz), and 83A (157.175 MHz). Response units of all agencies responding to a marine fire are authorized to transmit on these frequencies at the direction of the COTP.

The initial assessment shall be transmitted as soon as possible to all responding agencies using VHF-FM Marine Band Channel for International Distress, Safety and Calling Channel 16 (156.800 MHz) or USCG-public liaison Channel 22A (157.100 MHz). Maritime Safety Information Broadcasts and any hazardous conditions or waterways restrictions shall be transmitted on Channel 22A.

6300 Shipboard Communications

Numerous types of communications systems and equipment are used on board vessels. All large ships are equipped with internal telephone systems for communication between the bridge and the engine room, pump room, steering gear room, and various other spaces. Most large ships are also equipped with internal antennas and utilize low output portable radios to allow the ship’s crew to communicate with key personnel. These radios can be an important asset for the firefighter as agency radios may not work inside the hull of the vessel.

7000 Finance/Admin

The Incident Commander/Unified Command is responsible for organizing and staffing the Finance/Administration Section. Staffing should be a combination Coast Guard, other federal/state agencies, vessel or facility, local firefighting, and commercial contractor personnel. The Finance/Administration Section is responsible is responsible for all financial/cost tracking and analysis and administrative aspects of the incident.

7100 Initial Cost and Administration

Each responding entity will maintain their own cost accounting and administration using their established organizational procedures until an Incident Commander/Unified Command is established and the Finance/Administration Section is staffed.

7200 Financial Responsibility

The Responsible Party (RP), owner/operator of the source of the vessel or facility fire, is generally responsible for all financial costs associated with a marine firefighting incident.

If the Responsible Party does not have adequate funding available or does not take adequate or appropriate actions and there is a release or a potential release of oil or hazardous materials, the COTP, acting in his role as the FOSC may access federal funding. The Oil Spill Liability Trust Fund (OSLTF) or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, a.k.a. Superfund), may be accessed to fund all appropriate measures of response, including firefighting activities, to prevent, mitigate, or cleanup a release of oil or hazardous materials into the environment. However, firefighting activities solely related to the safety of life or property generally not qualify.

Appendix A: SMFF QRC

SALVAGE / MARINE FIREFIGHTING	Date/Time:
Case Title:	**MISLE:**
Watchstander:	**CIC** ☐ **Time:**

INITIAL INFORMATION COLLECTION – AWARENESS

*** EVALUATE FOR SEARCH AND RESCUE, USE INITIAL SAR QRC AS REQUIRED ***
(Complete Awareness portion at of Marine Casualty QRC at minimum)

Incident type (Check all that apply)**:**

- ☐ Grounding
- ☐ Sinking
- ☐ Risk of Fire
- ☐ Active Fire
- ☐ Collision
- ☐ Allision
- ☐ Flooding
- ☐ Capsizing
- ☐ Structural Damage
- ☐ Loss of Main Propulsion / Power
- Oil Spill / Hazardous Substance Release:
  - ☐ Actual ☐ Substantial Threat

Make Immediate Notifications

- ☐ **Active Emergency: Local 911 dispatch**
- ☐ National Response Center - (800) 424-8802
- ☐ (Sector) Duty FOSCR & Marine Investigator
- ☐ Other:
- ☐ Other:

Additional Location Details

Pier side?	☐ Yes	☐ No
In a port or a channel?	☐ Yes	☐ No
Blocking channel or HAZNAV?	☐ Yes	☐ No

Additional Vessel Details

Is a pilot onboard? ☐ Yes ☐ No

Vessel Type:

Vessel Response Plan (VRP)
All VRPs are stored in VRP Express. Learn about VRP Express and more on CG-MER-4 SharePoint site.

Does vessel have a VRP?	*Has VRP been activated by the Qualified Individual?*	Time Activated:
☐ Yes ☐ No	☐ Yes ☐ No	

VRP Qualified Individual (if applicable):	**VRP Primary SMFF Provider (if applicable):**
Name:	Name:
Phone (Mobile):	Phone (Mobile):
Company: - SELECT -	Company: - SELECT -
E-mail:	E-mail:

Actions Taken by Crew / Responsible Party (check all that apply)**:**

- ☐ Notifications made
- ☐ Ballast / De-ballast activated or connected
- ☐ Fixed Firefighting Systems activated
- ☐ Crew engaged in firefighting
- ☐ Cargo shifting
- ☐ Initial damage survey
- ☐ Re-float attempt made
- ☐ Pushed into bank / intentionally beached
- ☐ Cargo transfer / offload commenced
- ☐ Anchor set
- ☐ Tugs attached
- ☐ Soundings taken
- ☐ SMFF Resource Provider Remote Assessment conducted
- ☐ Other:

Inoperable Systems (check all that apply)**:**

- ☐ Navigation and Communication
- ☐ Lifesaving
- ☐ Main Engine
- ☐ Auxiliary Engine(s) or Generators
- ☐ Steering
- ☐ Fire Suppression Systems (Co2 or Water/Mist)
- ☐ Fire Pump
- ☐ Ballast Systems
- ☐ Crane
- ☐ Mooring Winches
- ☐ Anchor Windlass
- ☐ Inert Gas System / Nitrogen Generator
- ☐ Cargo Handling System(s)
- ☐ Other:

Other Details:

INITIAL ACTIONS

_____ **Active Fire:** Establish an incident coordination briefing with the responding Fire Dept. Incident Commander, Sector FOSCR, MI, and PDH, Qualified Individual, and Primary SMFF Provider

_____ Issue UMIB / SMIB as appropriate

_____ Upon FOSC Substantial Threat Determination, issue Administrative Order (SMFF Template) to vessel owner/operator to activate VRP and require Remote Assessment Consultation (if applicable)

_____ Initiate CIC (if applicable)

_____ Evaluate need for additional QRCs (multi-mission check)

_____ Determine appropriate security / safety zone needs

_____ Make notifications IAW briefing matrix

_____ Open MISLE case

PLANNING

_____ Receive or develop response plan

Are SMFF resources mobilized?

- ☐ Yes ➔
- ☐ No

Type & ETA to incident location:

- ☐ Firefighting Vessels
- ☐ External Firefighting Teams
- ☐ Heavy Lift

_____ Review and update Command Center RM IAW GAR 2.0 worksheet, document in MISLE

_____ Brief assets. Discuss mission objectives and risks/hazards identified using PEACE model

OPERATIONS

_____ Dispatch appropriate asset (if applicable)

_____ Receive RM hazards and mitigation with Risk vs Gain from all assets

Own Unit (Risk / Gain & Notes)	**Responding Unit(s)** (Risk / Gain & Notes)

_____ Brief situation, response plan and RM IAW briefing matrix

_____ Actively monitor case, review/update RM as situation evolves

CONCLUSION

_____ Make notifications IAW briefing matrix

_____ Release all assets (if applicable)

_____ Submit MISLE Case for review

POLICY/PROGRAM INFORMATION

References:

a) Code of Federal Regulations (CFR), Title 33, Part 155

b) Marine Environmental Response and Preparedness Manual, COMDTINST M16000 (series)

VRP Activation background, policy, and guidance (COMDTINST M16000.14 (series))

Background: VRPs provide clear guidance for response resources. These resources include vessel operators, Qualified Individuals (QIs), and the FOSC/COTP regarding the vessel's pre-designated marine salvors; and OSRO that have been identified to meet the required planning criteria for the vessel. The VRP also includes procedures for contacting and mobilizing these resources.

a) A plan must be activated when a vessel representative has determined on board resources and personnel may not meet the needs of an actual or potential incident. VRP activation occurs when the vessel representative contacts the QI identified in the VRP. VRP activation serves as the initial risk- based discussion critical in initiating an effective response. An activation does not always result in mobilization of resources. The FOSC should assess the situation, document the date and time that the VRP activation occurred, and ensure accurate information is logged in the incident timeline of the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) system. Units must track and report incidents involving VRP activations and deviations to Commandant (CG-MER) through District. Submissions should be made via email to vrp@uscg.mil and must include MISLE case number, vessel name, and a brief incident description. District may forward activation email to Area, at Area discretion.

b) Sector Commander/MSU Commanding Officer's FOSC or COTP authorities are in no way limited or dictated by the expectation to activate a VRP. The FOSC possesses the regulatory authority to approve a deviation from a VRP under exceptional circumstances; and if the proposed alternative actions clearly enable a more effective response. Before the FOSC authorizes a deviation, the FOSC must clearly document why the deviation is necessary in the MISLE activity and/or other relevant incident response documentation, such as an IAP.

33 CFR 155.1015 Tank Vessel Response Plan Applicability

a) This subpart applies to each vessel that is constructed or adapted to carry, or that carries, oil in bulk as cargo residue, and that –

1. is a vessel of the United States

2. Operates on the navigable water of the United States; or
3. Transfers oil in a port or place subject to the jurisdiction of the United States

33 CFR 155.5015 Non-tank Vessel Response Plan Applicability

a) This subpart applies to each self-propelled vessel that –

1. Carries oil of any kind as fuel for main propulsion;
2. Is not a tank vessel or is not certificated as a tank vessel;
3. Operates upon the navigable waters of the United States as defined in 46 U.S.C. 2101 (17a); and
4. Is 400 gross tons or more as measured under the convention measurement system in 46
5. U.S.C. 14302 or the regulatory measurement system of 46 U.S.C. 14502 for vessels not measured under 46 U.S.C. 14302.

33 CFR 155.4025 Definitions

33 CFR 155.4032 Other resource provider considerations

a) Use of resource providers not listed in the VRP

If another resource provider, not listed in the approved plan for the specific service required, is to be contracted for a specific response, justification for the selection of that resource provider needs to be provided to, and approved by, the FOSC. Only under exceptional circumstances will the FOSC authorize deviation from the resource provider listed in the approved vessel response plan in instances where that would best affect a more successful response.

Salvage means any act undertaken to assist a vessel in potential or actual danger, to prevent loss of life, damage or destruction of the vessel and release of its contents into the marine environment.

Appendix B: Marine Firefighting Resource Directory

State of Maryland		
Maryland Emergency Operations Center - (410) 517-3600		
County	**Fire Department**	**Emergency Management**
Anne Arundel County	(410) 222-8300	(410) 222-0600
Annapolis City	(410) 263-7975	(410) 216-9167
Baltimore City	(410) 396-5680	(410) 396-6188
Baltimore County	(410) 887-4500	(410) 887-5996
Calvert County	(410) 535-1600	(410) 535-1600
Cecil County	(410) 392-2006	(410) 392-2006
Charles County	(301) 609-3400	(301) 609-3429
Dorchester County	(410) 228-1818	(410) 228-1818
Frederick County	(301) 600-1536	(301) 600-6790
Harford County	(410) 638-4700	(410) 638-4900
Kent County		(410) 778-7458
Prince George's County	(301) 583-2200	(301) 324-4400
Queen Anne's County	(410) 758-6027	(410) 758-4500
Somerset County		(410) 651-0707
St. Mary's County		(301) 475-4200
Talbot County		(410) 770-8160
Wicomico County		(410) 548-4820
Worcester County		(410) 632-1315
Ocean City	(410) 289-4346	(410) 723-6646
District of Columbia		
Homeland Security and Emergency Management Agency (HSEMA) - (202) 727-6161		
Fire Department - (202) 673-3300		
OPA-90 National SMFF Resource Providers		
DonJon-SMIT - 703-299-0081		
Resolve Marine - 954-764-8700		
T&T Salvage - 713-534-0700		