

TABLE OF CONTENTS

8000 Marine Firefighting Plan

8100 INTRODUCTION	8000-1
8110 Purpose and Objective	8000-1
8120 Background	8000-2
8130 Scope	8000-3
8140 Geographic Boundaries	8000-4
8150 Abbreviations	8000-6
8160 Definitions	8000-7
8200 AUTHORITY, POLICY AND RESPONSIBILITY	8000-14
8210 Authority	8000-14
8220 Policy	8000-15
8220.1 Federal Policy	8000-15
8220.2 State Policy	8000-16
8220.3 Local Policy	8000-18
8230 Responsibilities	8000-19
8230.1 Owner/Operator Facility Responsibilities	8000-19
8230.2 Owner/Operator Vessels & Vessel Crew Responsibilities	8000-20
8230.3 Fire Department Responsibilities	8000-21
8230.4 Commercial Firefighting & Salvage Organizations Responsibilities	8000-22
8230.5 Coast Guard Responsibilities	8000-22
8230.6 State & County Emergency Management Responsibilities	8000-24
8300 PLANNING AND RESPONSE MANAGEMENT CONSIDERATIONS	8000-24
8310 Levels of Response	8000-24
8320 Basic Planning Considerations	8000-25
8320.1 Incident Notification	8000-25
8320.2 Communications	8000-25
8320.3 Actions Upon Notification	8000-26
8320.4 Use of Cleanup Contractors	8000-26
8320.5 Involvement of Pilots	8000-26
8320.6 Involvement of Salvors & Marine Chemists	8000-27
8320.7 Involvement of Marine Safety Center Salvage Team	8000-27
8320.8 Involvement of Marine Fire Fighting Task Force (MFFTF)	8000-27
8320.9 Involvement of Assist Tugs	8000-28
8320.10 Involvement of U.S. Army Corps of Engineers	8000-28
8330 Response Management Considerations	8000-29
8330.1 Access for Firefighting	8000-31
8330.2 Port Entry and Movement of a Burning Vessel	8000-31
8330.3 Allowing Entry or Movement of the Vessel	8000-32
8330.4 Additional Considerations Prior to Entry or Movement	8000-32
8330.5 Firefighting Pier / Anchorage Selection	8000-33
8330.6 Liability Factors in Considerations of Vessel Entry	8000-34

8330.7	Considerations for Denying Entry or Movement	8000-34
8330.8	Offshore Firefighting Considerations	8000-35
8330.9	Firefighting on Vessels	8000-36
8330.10	Vessel Stability Considerations	8000-37
8330.11	Firefighting Factors Affecting Vessel Stability	8000-38
8330.12	Stability Effects on Firefighting	8000-38
8330.13	Vessel Factor Affects Stability	8000-39
8330.14	Dewatering	8000-39
8330.15	List Correction	8000-39
8340	International Shore Connection	8000-40
8350	Marine Transportation System Recovery	8000-40
8360	Salvage Response	8000-40
8400	OPERATIONAL RESPONSE ACTIONS AND ORGANIZATION	8000-41
8410	Notification and Interagency Coordination	8000-41
8420	Command and Control	8000-42
8430	Unified Command	8000-43
8430.1	Organizational Chart	8000-44
8440	Operational Firefighting Priorities	8000-45
8450	Strategy and Tactics	8000-48
8450.1	General Tactics for Common Vessel Spaces	8000-48
8450.2	Special Considerations According to Vessel Type	8000-50
8460	Staging for Medical Treatment and Logistics	8000-55
8470	Security	8000-55
8500	LOGISTICS	8000-56
8510	Federal Resources	8000-56
8510.1	United States Coast Guard	8000-56
8510.2	Department of Homeland Security (DHS)	8000-56
8510.3	Department of Defense (DOD)	8000-56
8510.4	Federal Aviation Administration (FAA)	8000-57
8510.5	Federal Emergency Management Agency (FEMA)	8000-57
8510.6	Federal Bureau of Investigation (FBI)	8000-57
8510.7	National Transportation Safety Board (NTSB)	8000-57
8510.8	Environmental Protection Agency (EPA)	8000-57
8510.9	National Oceanic & Atmospheric Administration (NOAA)	8000-57
8510.10	General Services Administration (GSA)	8000-58
8510.11	U.S. Fish & Wildlife Service (USFWS), Department of the Interior	8000-58
8520	Other Government Agency Resources	8000-58
8520.1	State Governments	8000-58
8520.2	County & Municipal Government	8000-58
8530	Private Sector Resources	8000-59
8600	FINANCE	8000-62
8610	General	8000-62
8620	Facility & Vessel Owner/Operators	8000-62
8630	State of Delaware	8000-63

8640 State of New Jersey	63
8650 State of Pennsylvania (Commonwealth)	63
8660 U.S. Coast Guard	64
8670 U.S. Army Corps of Engineers (ACOE)	64
8680 Federal Emergency Management Agency (FEMA)	64
8700 TRAINING & PLAN ADMINISTRATION	64
8710 Training	64
8720 Drills & Exercises	65
8730 Plan Review	66
APPENDIXES	
A. Marine Fire & Explosion Notification Form	A-1
B. County Fire Dispatch Center (Fire Board)	B-1
C. Initial Firefighting, Operations, Machinery & Engineering Space Fire Checklist	C-1
D. List of Local Firefighting Resources	D-1
E. List of Commercial Firefighting / Salvage Resources & Equipment	E-1
F. Salvage and Firefighting Services and Response Timeframe	F-1

8000 Marine Firefighting Plan

8100 INTRODUCTION.

8110 Purpose and Objective.

This plan is written in accordance with the Coast Guard Marine Safety Manual, (COMDTINST M16000 series) which requires Captain of the Port (COTP) Delaware Bay to develop current and effective contingency plans in order to provide adequate response to fires and other port emergencies, such as vessel collision/sinking, and aircraft crashes through resources provided by federal, state, county, municipal, and commercial entities.

Major marine firefighting incidents will likely require the coordinated efforts of federal, state, and local resources to carry out the level of response required. The purpose of this plan is to provide guidance to the Captain of the Port (COTP) and local fire agencies concerning fighting fires on vessels and waterfront facilities to ensure coordinated response to marine fires occurring throughout the COTP Delaware Bay Area of Responsibility (AOR).

This regional contingency plan has the following major objectives:

- ☐ To protect lives and property in the Sector Delaware Bay Area of Responsibility (AOR).
- ☐ Provides the on-site Incident Commander with the flexibility that is based on incident parameters with options to utilize the contingency plan to address incident specific identified strategic and tactical objectives.
- ☐ To assure the free flow of maritime commerce.
- ☐ To secure a relationship among responsible federal, state, and county agencies, local municipalities, and commercial facilities, so that resources may be employed to affect a swift, well-coordinated response to vessel and waterfront fire emergencies it is necessary:
 - To identify and clarify lines of authority and response within the maritime community; an organizational chart is included as Section 105;
 - To identify jurisdiction and the levels of responsibility on the part of responding agencies: each agency will be guided in more detail by its own operating procedures.
 - To promote safety for firefighting personnel and the port community.
 - To protect the marine environment and the community from damage or disaster.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-1
-----------	--------------------------	---	---	------	--------

With these objectives met a multi-agency response to a marine disaster or fire will be characterized by the:

- ☐ Rapid deployment of assets by trained search and rescue agencies, medical, and firefighting resources to a marine disaster or fire;
- ☐ Rapid establishment of an interagency Unified Command under the Incident Command System (ICS);
- ☐ Pre-positioning of fire companies, law enforcement personnel and medical/rescue personnel at pre-designated landing sites to assist victims being brought ashore;
- ☐ Safe and humane recovery of victims and casualties;
- ☐ Transport of victims from landing sites to designated medical facilities;
- ☐ Proper care, emergency medical treatment, and tracking of victims;
- ☐ Close coordination with local medical examiners, coroners and mortuaries with regard to casualty recovery and disposition;
- ☐ Provision of assistance for victims and search and rescue (SAR) personnel with regard to dealing with stress related to the search and casualty recovery.

8120 Background.

Throughout the United States there have been incidents where prompt and effective response to shipboard fires was inadequate. A contributing factor has been the lack of understanding as to who fights a shipboard fire, and what their jurisdictions and incident command structures are. Likewise, the question of who pays for resources committed to firefighting is also a concern that has delayed response. Unfortunately, any delay will probably allow for the escalation of the fire. Existing State, county, or municipal disaster preparedness organizations, including their fire departments, are well suited to handle non-marine fires and other emergency conditions. As a result there may be a large number of units from numerous jurisdictions (potentially across as many as three state boundaries) responding to a marine disaster/fire.

Most fire departments have never fought a shipboard fire, and a ship's structure can be unfamiliar and dangerous to fire fighters. Often, it is difficult to assemble knowledgeable personnel and adequate resources to handle the emergency as they often have to travel across political and jurisdictional lines. In order to facilitate responses mutual aid requests are coordinated through state and county emergency agencies (EMAs), which will also aid in contacting experienced marine firefighting personnel or organizations that firefighting companies may be unfamiliar with.

During a marine disaster/fire the Coast Guard will be the Federal On-Scene Coordinator (FOSC), and will carry out the responsibilities of the Search and Rescue Mission Coordinator during water rescue response and will share responsibilities as coordinators

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-2
-----------	--------------------------	---	---	------	--------

with the fire incident commander (the Fire Chief in whose jurisdiction the fire occurs), maritime experts, and other agencies that may not be accustomed to working together to control the emergency. The Coast Guard's primary responsibility in a marine fire or disaster is ensuring that all victims have been safely recovered or otherwise accounted for. State, county, or municipal fire and rescue agencies will assist with providing water-borne resources, if available, to participate in the recovery of victims. Local emergency medical service personnel should coordinate with responding agencies, ensuring triage sites are established in appropriate locations to treat victims being brought ashore and victim transportation to appropriate medical facilities is arranged. Local resources will normally be represented in the Unified Command System by either state or county personnel.

In marine firefighting, Sector Delaware Bay maintains the official posture that the Coast Guard will provide "assistance as available". It is not intended that the Coast Guard will circumvent the authority, or ability of state, county, or municipal governments to respond to marine fires within their jurisdiction, as long as they are able to adequately respond with their own resources. While the Coast Guard has an interest in assuring port and environmental safety, this interest **does not extend to preempting local responsibility and authority** for shipboard and waterfront facility firefighting as per the Federal Fire Prevention and Control Act of 1974 (PL 93-498). The Coast Guard intends to maintain this "assistance as available" posture, while emphasizing the development of a regional plan and inter-agency cooperation as the viable and lawful solution to marine firefighting and search and rescue needs.

This regional plan recognizes that any one emergency response service, agency, or fire department lacks the resources and trained personnel that are in a position to assume the burden of responding to a marine disaster or fire alone, and that the impact of such a marine disaster or fire on the community can be severe. Therefore, the plan will rely heavily on the continued negotiation of locally derived mutual aid agreements within counties and across county and state lines. It is not intended for existing mutual aid to be superseded; this plan is intended to compliment and encourage expansion of mutual aid agreements. Subscription to the plan will result in a number of benefits to the port community. It will assist communities in developing their capabilities to respond to the marine fires or disasters within their jurisdiction and to pool resources with other fire departments and agencies in using available equipment, including commercial resources on a contract basis with federal, state, county, or local resources on a consumable reimbursement basis.

8130 Scope.

This plan encompasses the whole of the maritime domain within the COTP Delaware Bay AOR.

The COTP Delaware Bay zone is described in **33 CFR 3.25-05** and encompasses portions of three states (Delaware, New Jersey, and Pennsylvania). In general terms, it includes the New Jersey and Delaware Atlantic Coast from Long Branch, NJ to the Delaware/Maryland border out to 12 nautical miles, the entire state of Delaware, the majority of New Jersey, and the eastern portion of Pennsylvania.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-3
-----------	--------------------------	---	---	------	--------

The complexity, scope, and potential consequences of a fire occurring within the Maritime Transportation System (MTS) requires that there be a coordinated effort between all MTS users and local fire agencies. This effort will require open communication, enhanced awareness of potential threats and coordinated procedures for prevention, preparedness, response and recovery.

This plan must extend beyond the required facility, vessel and local fire departments emergency response plans and provide a foundation for responding to a fire in the marine environment.

8140 Geographic Boundaries.

Geographic boundaries for the zone administered by Sector Delaware Bay and those of the states of New Jersey and Delaware and the Commonwealth of Pennsylvania with their subordinate counties are outlined in this section to foster a clear understanding of the areas of jurisdiction for planning and response purposes.

8140.1 COTP Delaware Bay Zone.

The COTP Delaware Bay zone is described in **33 CFR 3.25-05** and encompasses portions of three states (Delaware, New Jersey, and Pennsylvania). In general terms, it includes the New Jersey and Delaware Atlantic Coast from Long Branch, NJ to the Delaware/Maryland border out to 12 nautical miles, the entire state of Delaware, the majority of New Jersey, and the eastern portion of Pennsylvania.

8140.2 State Boundaries.

- ☐ New Jersey and Pennsylvania. The state line between New Jersey and Pennsylvania, from north to south, generally follows the centerline of the Delaware River's main channel.
- ☐ New Jersey and Delaware. The state line between New Jersey and Delaware's eastern border extends across the Delaware River to the mean low water mark along the New Jersey shore. The line extending directly across the mouths of New Jersey creeks and rivers, south to and including the northern tip of Artificial Island, where it again generally follows the centerline of the main river channel to the Atlantic Ocean.
- ☐ Pennsylvania and Delaware. The southern Delaware River border of the Pennsylvania state line roughly terminates on a line scribed across the Delaware River midway between the mouth of Raccoon Creek and Old Man's Creek, New Jersey.

8140.3 County Boundaries.

☐ New Jersey Counties.

- Mercer County. Southern river boundary terminates in the vicinity of Blacks Creek near Bordentown, NJ.
- Burlington County. From the vicinity of Blacks Creek near Bordentown, down river to the mouth of Pennsauken Creek.
- Camden County. From the mouth of the Pennsauken Creek, down river to the mouth of Big Timber Creek.
- Gloucester County. From the mouth of Big Timber Creek, down river to Old Man's Creek.
- Salem County. From Old Man's Creek, down river to Stowe Creek.
- Cumberland County. From Stowe Creek, down river to Forest Creek.
- Cape May County. From Forest Creek, down river and around the Cape May Point and north along the Atlantic Coast to the Great Egg Harbor Inlet and Tuckerton River.
- Atlantic County. From the Great Egg Harbor Inlet and the Tuckerton River, northward along the Atlantic Coast to the mid-channel mark on the Mullica River through Great Bay.
- Ocean County. From the mid-channel mark on the Mullica River through the Great Bay, northward along the Atlantic Coast to the mid-channel mark on the Manasquan River.

☐ Pennsylvania Counties.

- Bucks County. The southern boundary terminates at the mouth of Poquessing Creek.
- Philadelphia County. From the mouth of the Poquessing Creek down river to the southern boundary which is between Fort Mifflin and the Philadelphia International Airport.
- Delaware County. From the area which is between Fort Mifflin and the Philadelphia International Airport, down river to Raccoon Creek, the southern boundary at the Delaware State Line.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-5
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□ **Delaware Counties.**

- New Castle County. From the Delaware State Line with Pennsylvania, southward to the mid-channel mark of the Smyrna River, this also includes the Chesapeake and Delaware (C & D) Canal up to the Maryland border.
- Kent County. From the mid-channel mark of the Smyrna River southward to the mid-channel mark of the Mispillion River.
- Sussex County. From the mid-channel mark of the Mispillion River to include the Nanticoke River and its tributaries southward to the Maryland State Line.

8150 Abbreviations.

ACOE	Army Corps of Engineers
ACP	Area Contingency Plan
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BOA	Basic Ordering Agreement
CONUS	Continental United States
COTP	Captain of the Port
EA	Environmental Assessment
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FOSC	Federal On-Scene Coordinator
FWPCA	Federal Water Pollution Control Act
ICS	Incident Command System
IMO	International Maritime Organization
LOI	Letter of Intent
MARAD	Maritime Administration
MFSA	Maritime Fire and Safety Association
NARA	National Archives and Records Administration
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NIMS	National Incident Management System
NPRM	Notice of Proposed Rulemaking

NPV	Net Present Value
MSM	USCG Marine Safety Manual (COMDTINST M16000)
NTTAA	National Technology Transfer and Advancement Act
NVIC	Navigation and Vessel Inspection Circular
OCIMF	Oil Companies International Marine Forum
OCONUS	Outside the Continental United States
OPA 90	Oil Pollution Act of 1990
OSHA	Occupational Safety and Health Administration
OSRO	Oil Spill Removal Organization
P&I	Protection and Indemnity
PRA	Programmatic Regulatory Assessment
QI	Qualified Individual
SERT	Salvage Engineering Response Team
SOLAS	International Convention for the Safety of Life at Sea, 1974
STCW	International Convention on Standards of Training, Certification and Watchkeeping, 1978
TMSA	Tri-State Maritime Safety Association
USCG	U.S. Coast Guard
UCS	Unified Command System
VRP	Vessel Response Plan
VTs	Vessel Traffic Service

8160 Definitions.

ATLANTIC STRIKE TEAM (AST) - The AST is one of 3 Special Teams that make up the National Strike Force. It is a vital national asset comprised of a unique, highly trained cadre of Coast Guard professionals who maintain and rapidly deploy with specialized equipment and incident management skills any time to any place or hazard. It is currently located in Fort Dix, New Jersey.

AREA MARITIME SECURITY COMMITTEE (AMSC) - The AMSC, established under the authority of the CG COTP, brings together appropriately experienced representatives from a variety of sources in its zone to continually assess security risks to the COTP zone, determine appropriate risk mitigation strategies, and develop, revise, and implement the AMS plan. The AMSC also serve as a mechanism to communicate security threats and changes in MARSEC levels to port stakeholders.

CAPTAIN OF THE PORT (COTP) - The Coast Guard officer designated by Commandant, USCG, to exercise federal responsibility for the safety and security of ports

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-7
-----------	--------------------------	---	---	------	--------

and waterways in a specific geographic area. For purposes of this Plan, COTP means COTP Delaware Bay.

COMMANDANT (COMDT) - Commandant, U.S. Coast Guard. Head of this Federal Agency.

COMMAND POST - Command Center established by the responsible fire department at the scene of a marine fire; the location from which the Incident Commander operates.

DANGEROUS CARGO MANIFEST - The Dangerous Cargo Manifest (DCM) is a listing of all hazardous material cargo on a vessel and contains a great deal of information of interest to emergency response teams. Vessel information includes name, call sign, flag, port of loading/discharge, and date. Cargo information includes proper shipping name, gross weight of cargo, hazard class, types of package, storage locations, and emergency response telephone number. Only hazardous materials subject to 49 CFR or the International Maritime Dangerous Goods (IMDG) code may be listed on the DCM.

DISTRICT COMMANDER - Coast Guard Officer, who has final authority for the performance of Coast Guard functions and missions within his/her district. The COTP Philadelphia zone lies within the Fifth Coast Guard District headquartered in Portsmouth, Virginia.

EMBARKATION/DEBARKATION AREA - Pre-designated pier or other facility for transferring victims from rescue crafts to shore-side medical service personnel and for staging of a command post, equipment, triage services, triage services, and/or personnel.

EMERGENCY MANAGEMENT AGENCY (EMA) - State/county coordinator of emergency planning and response.

EMERGENCY OPERATIONS CENTER (EOC) - state or county run facility with extensive inter-agency communication and coordination capabilities. It will be activated during significant emergencies such as a Level II or Level III fire as defined elsewhere in this plan.

EMERGENCY OPERATIONS PLAN (EOP) - State, county, or municipal document which sets forth the general policies and procedures to be carried out by jurisdictions in order to provide for an effective integrated response plan designated to minimize the loss of life and property during an emergency.

FEDERAL MARITIME SECURITY COORDINATOR (FMSC) - Designated under the Area Maritime Security Regulations in 33 CFR 103 as the CG COTP. The FMSC has the authority to establish, convene, and direct the Area Maritime Security Committee (AMSC), appoint AMSC members, develop and maintain the AMS Plan in coordination with the AMSC, implement and exercise the AMS Plan, and maintain the records.

FIRE CONTROL PLAN - A copy of this plan is prominently displayed in a weather tight enclosure, located outside the deckhouse (usually near the brow) for the assistance of shoreside firefighting personnel. It contains a set of general arrangement plans showing, for

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-8
-----------	--------------------------	---	---	------	--------

each deck, the fire control stations, fire resistant and fire retardant bulkheads. It also contains particulars of the fire detection, manual alarm, fire extinguishing systems, fire doors, means of access to different compartments, and ventilating systems including locations of dampers and fan controls.

FIRE DEPARTMENT - An organization of people, equipment, and material for the purpose of fighting fires, generally sponsored by a political or governmental entity having local jurisdiction and responsibility for fire suppression and public safety in a geographic area.

FIRE FIGHTING PIER/ANCHORAGE - Pre-designated piers/anchorages for firefighting, located in a more advantageous area. They provide areas for staging a command post, equipment, and personnel. The bottom has a level, non-sloping contour with adequate mean low water depth to facilitate fireboat operations. Anchorages are usually temporary while fire-fighting equipment is being organized.

FEDERAL ON-SCENE COORDINATOR (FOSC) - The federally designated official, usually the CG COTP, who acts to ensure that federal concerns for port safety and environmental concerns are addressed during a multiple agency response incident.

GULF STRIKE TEAM (GST) - The GST is one of 3 Special Teams that make up the National Strike Force. It is a vital national asset comprised of a unique, highly trained cadre of Coast Guard professionals who maintain and rapidly deploy with specialized equipment and incident management skills any time to any place or hazard. It is currently located in Mobile, Alabama.

HAZARDOUS MATERIALS - These are materials which, when commercially transported, are designated by the US Department of Transportation (DOT) as presenting an unacceptable risk to health, safety, and property. These materials are carried by vessel in accordance with US DOT or USCG regulations. Regulations applicable to the transportation of hazardous materials by vessel include:

- ☐ Title 49 CFR, Subchapter C (Packaged Materials)
- ☐ Title 46 CFR, Subchapter D (Tank Vessels)
- ☐ Title 46 CFR Subchapter O (Certain Bulk Dangerous Cargoes)

INCIDENT COMMAND SYSTEM (ICS) - A management tool to provide for continuity of command from the arrival of the first fire unit to the termination of the incident. ICS is recommended by NFPA Standard 1500, Firefighter Occupational Health & Safety and is mandated by Superfund Amendment and Reauthorization Act (SARA), Title III. Homeland Security Presidential Directive (HSPD)-5, *Management of Domestic Incidents*, requires that all incidents, events, and disasters be managed utilizing NIMS ICS.

INCIDENT COMMANDER - The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The IC has overall authority and responsibility for conducting incident

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-9
-----------	--------------------------	---	---	------	--------

operations and is responsible for the management of all incident operations at the incident site. (See also: Unified Command).

INTERNATIONAL SHORE CONNECTION - This device is used to connect the water system piping of the vessel with the water supply on the shore. International Code requires that the ship have a connection with the ship's fire system threads on one end and the international bolted flange on the other end. National Fire Code (NFPA 1405) requires the shoreside fire department must have a connection with the shoreside fire department's threads on one end and the international bolted flange on the other end.

KEY TECHNICAL ADVISORS (KTA) - A small group which is known as the Technical Assist Team (TAT), normally 4-5, with special expertise in firefighting and the marine environment, who provide advice to the Incident Commander and may respond to the scene of a marine fire. They will provide operational advice under the auspices of the Captain of the Port (COTP) as requested and provide administrative liaison between Tri-State Marine Safety Association (TMSA) resources and the Incident Commander.

LEVELS OF RESPONSE - (Planning and Response Considerations)

- ☐ **Level I** - A marine disaster involving a smaller vessel or a facility that does not pose a major threat to the harbor. This level of disaster can usually be handled by one fire department on the local level with minimal waterside support. Minimal state and federal assistance will be required.
- ☐ **Level II** - A marine disaster on a vessel or facility that has the potential to be a significant risk to the port. This level of disaster may involve the extra alarm response of two or more fire departments, with mutual aid and waterside support requiring the coordination of county fire dispatch centers and state EMA'S. The advice of various maritime experts and their assistance will be coordinated through the CG COTP.
- ☐ **Level III** - A marine disaster of major proportions, posing a high risk to the ports. This may evolve from a Level II fire. It will involve the extra alarm response of many fire departments, with mutual aid and extensive waterside support, requiring the coordination of county fire dispatch centers and state EMA's. The advice of various maritime experts and their assistance will be coordinated through the CG COTP.

LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) - A group established by the State's Emergency Response Commission (SERC) comprised of state & local law enforcement, civil defense, firefighting, first aid, health, environmental, hospital, transportation, media, community groups, and owners/operators subject to the requirements under Emergency Planning Community Right to Know Act (EPCRA). This group is responsible for data collection, emergency operation planning, and recording release notification information of substances regulated under EPCRA.

MAJOR MARINE CASUALTY - A casualty involving a vessel, other than a public vessel, which results in one of the following:

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-10
-----------	--------------------------	---	---	------	---------

- ☐ The loss of six or more lives
- ☐ The loss of a mechanically-propelled vessel of 100 or more gross tons;
- ☐ Property damage initially estimated at \$500,000.00 or more;
- ☐ “Serious threat”,(as determined by the Coast Guard Commandant with concurrence by the National Transportation Safety Board chairperson), to life, property or the marine environment by hazardous materials.

MARINE CHEMIST - A person who is certified through the National Fire Protection Association (NFPA) to determine if enclosed spaces are Safe for Workers and Hotwork or other operational restrictions for overhaul after the fire has been extinguished. The Marine Chemist should also be consulted for any fires involving hazardous materials.

MARINE DISASTER - Any disaster in the marine environment which actually has incurred, or has the potential for, mass casualties that overwhelms the capabilities of any one federal, state, or municipal agency to respond. As to when a marine casualty becomes a marine disaster is highly subjective and will be left to the Unified Command to decide.

MARINE FIRE FIGHTING TASK FORCE (MFFT) - Comprised of subscribers to the contingency plan. The task force shall identify and recruit members of the port and firefighting community that will be pre-designated and accepted as technical experts. This group should include qualified firefighters, experts in shipboard systems, naval architects, marine engineers, and others in the port with skills in public safety and regional communications. At the time of a marine disaster this group would assume an advisory role at the incident command post. The MFFT is housed under the auspices of TMSA.

MARITIME INCIDENT RESPONSE TEAM (MIRT) - The MIRT is currently comprised of the Operations Support Team (OST) and Technical Assist Team (TAT) members under the direction of the MIRT Executive Director and Chief Response Officer. The MIRT functions to support TMSA activities during training, exercises, and operations. The MIRT provides operational and technical support for the U.S. Coast Guard, other agencies, local incident commanders, as well as member vessel and facility operators during maritime incidents. The current organization has no formal structure, but is organized as needed on an incident specific basis. It will often include TMSA, fire, Coast Guard, and other personnel as needed to respond to an incident.

MATERIAL SAFETY DATA SHEET (MSDS) - The MSDS is a chemical product information guide to be used if the product becomes a hazard because of a release, fire, or other unknown reaction. The MSDS contains information as to the fire problems, health hazards, toxicity, and reactivity of the chemical or product for which the MSDS was written. All chemicals and products for which chemicals were used in its manufacture must have an MSDS sheet.

MARITIME TRANSPORTATION SECURITY ACT OF 2002 (MTSA) - The Act seeks to enhance maritime security in a manner that maximizes benefits while minimizing costs. These regulations impose broad security requirements on the both the U.S. domestic and international marine industry.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-11
-----------	--------------------------	---	---	------	---------

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - NFPA is an international organization charged with creating and maintaining minimum standards and requirements for fire prevention and suppression activities, training, and equipment, as well as other life-safety codes and standards. This includes everything from the personal protective equipment utilized by while extinguishing a blaze.

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) - Homeland Security Presidential Directive (HSPD)-5, *Management of Domestic Incidents*, directed the development and administration of the National Incident Management System (NIMS). NIMS provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

NIMS works hand in hand with the [National Response Framework \(NRF\)](#). NIMS provides the template for the management of incidents, while the NRF provides the structure and mechanisms for national-level policy for incident management.

NATIONAL STRIKE FORCE (NSF)- The National Strike Force (NSF) provides highly trained, experienced personnel and specialized equipment to Coast Guard and other federal agencies to facilitate preparedness for and response to oil and hazardous substance pollution incidents in order to protect public health and the environment. The NSF's area of responsibility covers all Coast Guard Districts and Federal Response Regions.

OCMI - A Coast Guard Officer, who is responsible for the inspection of U.S. vessels to assure compliance with applicable laws and regulations relating to safe construction, equipment, manning and operation.

ON-SCENE COMMANDER (OSC) - A larger Coast Guard unit, acting as a command and control platform that coordinates all on-scene search and rescue (SAR) assets during that phase of a marine disaster/fire emergency response.

OPERATIONS SUPPORT TEAM MEMBERS - The Operations Support Team (OST) members are comprised of volunteers from the response community that have completed marine firefighting, search and rescue, or other operational training that can support field operations, exercises and training. The OST is divided into functional elements including fire support operations, hazardous materials, dewatering operations as needed.

PACIFIC STRIKE TEAM (PST) - The PST is one of 3 Special Teams that make up the National Strike Force. It is a vital national asset comprised of a unique, highly trained cadre of Coast Guard professionals who maintain and rapidly deploy with specialized equipment and incident management skills any time to any place or hazard. It is currently located in Novato, California.

PUBLIC SAFETY ANSWERING POINT- A centralized coordination center that dispatches emergency units to fires and other emergencies. These centers also coordinate

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-12
-----------	--------------------------	---	---	------	---------

requests for mutual aid. Law Enforcement, Emergency Medical Service, in addition to fires and other emergencies.

REGIONAL RESPONSE TEAM (RRT) - A Coast Guard command of highly specialized, technical individuals who provide expertise in oil pollution, chemicals, and hazardous materials. Each RRT maintains a Regional Contingency Plan (RCP) and has state, as well as federal government, representation. EPA and the Coast Guard co-chair the RRTs. RRTs are planning, policy and coordinating bodies and do not respond directly to the scene. The RRT provides assistance as requested by the On-Scene Coordinator during an incident. COTP Delaware Bay resides in Regional Response Team II and III zone.

SAFETY ZONE - A safety zone is a water area or a water/shoreside area to which, for safety or environmental protection purposes, access is limited to authorize persons, vehicles or vessels. The safety zone is established by the COTP to protect vessels, structures, and shore areas. The safety zone can be fixed or mobile around a moving vessel. The COTP may direct who and what may operate within the safety zone.

SALVAGE COMPANY REPRESENTATIVE - A person or company who has been contracted to either assist in the firefighting effort or stabilize/recover the vessel following the fire for final disposition. The salvage representative may be contracted by the owner/operator of a vessel or a regulatory agency (local, state, federal) when the owner/operator has not responded in a timely manner. The agency decision to contract a salvor should be the function of a unified command.

SAR MISSION COORDINATOR (SMC) - The Coast Guard command that has the responsibility of deploying and coordinating available search and rescue resources in order to conduct the rescue of individuals in danger.

SEARCH AND RESCUE COORDINATOR (SC) - The official designated by the Commandant of the U. S. Coast Guard to initiate, coordinate and terminate Coast Guard SAR operations within a SAR Region. The SC for this region is the Coast Guard Fifth District Commander in Portsmouth, VA.

SEARCH AND RESCUE UNIT (SRU) - A facility that actually performs the search, rescue or similar operation during a SAR Case. SRUs normally report directly to the OSC.

SECURITY ZONE - Security zones are designated areas of land, water, or land and water established for such time as is necessary to prevent damage or injury to any vessel or waterfront facility to safeguard ports, harbors, territories, or water of the United States, or to secure the observance of rights and obligations of the United States. The security zone is established by the COTP or CG District Commander. The designation of a security zone may only be made for areas within the territorial limits of the United States.

SIGNIFICANT MARINE CASUALTY - Those casualties that involve important safety issues or cause substantial media interest. Significant marine casualties generally involve the following:

- ☐ Multiple deaths or a single death caused by unusual circumstances;

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-13
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- Hazard to life, property, or the marine environment (e.g. the sinking of a chlorine barge); and/or;
- The loss of any inspected vessel.

SUPSALV - U.S. Navy Supervisor of Salvage is the primary federal resource for marine salvage operations. Equipment and operators are available on a cost-reimbursable basis. Additionally, SUPSALV provides phone consultations, evaluations of proposed salvage plans, and salvage engineers who are available for dispatch to a scene.

TACTICAL CONTROL - Where the entity in charge assumes command and control during an operational incident (e.g., on scene commander) and directs the efforts of other entities (e.g., search and rescue units) directly involved in the evolution.

TECHNICAL ASSIST TEAM (TAT) - Is comprised of Key Technical Advisors (KTA) and are primarily volunteers from sections of industry that have expertise in Naval Engineering, Marine Chemists, Marine Architects, Facility Operations, Vessel Operations, Admiralty Law, Environmental Response and other related functions that may be critical to operations in support of TMSA and/or the local incident commander.

TRI-STATE SEARCH AND RESCUE (TriSAR) - The Tri-State Search and Rescue was formed in 1997 as a planning and response organization to address Maritime Disaster Response Operations on the Delaware River and Bay involving aircraft and passenger vessels. TriSAR membership includes local emergency responders with waterfront jurisdiction, local maritime industry, and appropriate federal and state emergency management agencies.

THE TRI-STATE MARITIME SAFETY ASSOCIATION (TMSA) - A non-profit organization made-up of the Delaware River and Bay Marine Fire Fighting Task Force (MFFTF) and TriSAR. The TMSA is dedicated to promoting the development of maritime safety in and along the waterways of the States of Delaware, New Jersey and the Commonwealth of Pennsylvania.

UNIFIED COMMAND (UC) - An application of ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the Unified Command to establish their designated Incident Commanders at a single ICP and to establish a common set of objectives and strategies and a single Incident Action Plan. This is accomplished without losing or abdicating authority, responsibility, or accountability.

WATERFRONT FACILITY - All piers, wharves, docks and similar structures to which vessels may be secured. This includes buildings on or contiguous to, such structures and the equipment and materials on such structures. Some of these facilities handle flammable/combustible liquids or other hazardous materials and are federally regulated and are termed "Designated Waterfront Facilities" as described in 33 CFR, Sect. 126.05. A complete listing of these facilities on the Delaware River is provided in the Philadelphia Area Contingency Plan (ACP).

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-14
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8200 AUTHORITY, POLICY AND RESPONSIBILITY.

8210 Authority.

To carry out his/her responsibilities, 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 fire), within the capability of available Coast Guard resources. In addition, the COTP has been delegated authority under the Ports and Waterways Act (33 USC 1223-1225) to direct the anchoring, mooring, or movement of a vessel; to specify times of vessel entry, movement, or departure to, from, or through ports, harbors, or other waters; to restrict vessels operation in hazardous conditions to vessels which have particular operating characteristics or capabilities; or to direct the handling, loading, discharge, storage and movement including, emergency removal, control and disposition of explosives or other dangerous cargo or substances, on any bridge or other structure on or in the navigable waters of the United States or any land structure immediately adjacent to those waters.

Additionally, under the Clean Water Act, the Coast Guard COTP, as the pre-designated On Scene Coordinator for pollution discharge response and removal, may coordinate and direct all public and private efforts directed at removal or elimination of imminent and substantial threats to the environment. Among the actions that may be taken, are the immediate removal and disposal of vessels, structures, and/or floating debris. The Intervention on the High Seas Act (33 USC 1471) extends the Coast Guard's authority to take similar preemptive or corrective action onto the high seas (i.e., beyond the 12-mile territorial sea).

Specifically, it authorizes the Commandant of the Coast Guard to take such measures on the high seas as may be necessary to prevent, mitigate, or eliminate grave and imminent danger to the coastline or related interests from pollution or threat of pollution of the sea by oil, following a maritime casualty or acts related to such a casualty which may reasonably be expected to result in major harmful consequences. This authority rests with the Commandant. The COTP, through the District Commander, should relay any recommendation to take such action to Commandant.

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. Such personnel may be provided by career and volunteer fire departments, volunteer ambulance services, hospitals, paramedic services, etc.

The three states, Pennsylvania, New Jersey, and Delaware are responsible for the coordination of emergency response systems under their jurisdictions, which extend to the state boundaries. Those boundaries consequently divide firefighting jurisdiction on the Delaware River and Bay between the three states, and could cause disputes. The states of Delaware and New Jersey have jurisdiction on the Atlantic Ocean extending 3 NM from the shoreline.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-15
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8220 **Policy.**

8220.1 Federal Policy. Federal Fire Prevention and Control Act of 1974 (pl 93-498) states that fire prevention and control is and should remain a state and local responsibility, although the Federal government must help to reduce fire losses.

- **U. S. Coast Guard.** The Coast Guard’s firefighting assistance policy is set forth in the Marine Safety Manual, Volume VI, Sec. 86-6, COMDTINST M16000.11. 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.”
- **Captain of the Port (COTP) Delaware Bay.** The Coast Guard Policy on firefighting does not relieve the Coast Guard Captain of the Port (COTP) of the responsibility for the overall safety of the port. It also does not restrict the lawful authority of the COTP to act in the best interest of the safety of life, property and the environment. Federal law gives the Captain of the Port authority to take full or partial control or direct the operation of any vessel within the territorial waters of the United States under his jurisdiction. This is done whenever it appears to the COTP that such action is necessary in order to secure such vessel from damage or injury, or to prevent damage or injury to any vessel or waterfront facility. The COTP, or representative, will respond to assist as necessary, with waterside traffic control, waterside firefighting assistance, and personnel familiar with shipboard construction, layout, common firefighting systems, and stability.

This plan is based on the assumption that a major marine fire, particularly a vessel fire, will require resources beyond those locally available. In these cases, the Coast Guard will establish a Unified Command with facility/vessel representatives, and other federal, state, and/or local officials to assist with the coordination of assistance to local firefighting units to the extent that resources permit. However, Coast Guard participation does not relieve state or local jurisdictions of their responsibilities.

8220.2 **State Policy.**

- **State of Delaware.** Delaware state law gives broad authority to the Fire Chief to "request and be supplied with additional materials such as sand, treatments, chemicals, etc., and special equipment when it is deemed a necessity, to prevent the further spread of the fire or hazardous condition”, and to charge the property owner for the costs incurred (Title 16 Chapter 67 Del. Section 6701A). The

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-16
-----------	--------------------------	---	---	------	---------

Director of the Delaware Emergency Management Agency (DEMA) is primarily responsible for providing guidance and direction for disaster planning and coordinating disaster emergency response operations, including assistance obtained from adjacent states and the federal government. Insofar as possible the coordination of firefighting and rescue resources, and any problems that occur, should be handled at the lowest possible level. As such, local fire and rescue official have control over all local resources in response to an emergency.

- **State of New Jersey.** The State Director, Office of Emergency Management (NJ OEM) (i.e., the Superintendent, NJ Division of State Police) is primarily responsible for planning, directing, and coordinating emergency or disaster preparedness operations within the State of New Jersey. The State Director's Procedures (Directive No. 33 of 12 January 1981) are to be followed by the municipal Fire Chief and the county Emergency Management Coordinator when requesting aid as a result of fire and/or situations leaving a municipality vulnerable to a fire. The directive states, "The decision to declare a Local Fire Disaster Emergency remains with the local Fire Chief and shall be based on an evaluation utilizing the best information available from agencies involved".

As a home rule state, authority in New Jersey is vested in the lowest level of government possible. As such, an emergency or disaster will be responded to and contained at the lowest level of government. Upon determination by the local emergency management coordinator that the available resources are, or will become insufficient, requests may be made to the next higher level of government for assistance. Any assistance made available from higher levels of government will be in support of local emergency operations and the responsibility and authority for maintaining emergency or disaster control shall remain with the requesting level of government. The state of New Jersey recognizes the potential for disaster, and the need for both the pooling of resources and early response. Also, the Coast Guard and assisting fire departments may be considered as advising "agencies involved."

The 21 counties of New Jersey are divided into three regions, each with a State Region Coordinator who is to assist the State and county emergency responses. The three regions are:

- Northern. Sussex, Passaic, Bergen, Warren, Morris, Essex, Hudson
 - Central. Hunterdon, Somerset, Union, Mercer, Middlesex, Monmouth, Ocean
 - Southern. Burlington, Camden, Gloucester, Salem, Atlantic, Cumberland, Cape May
- **State of Pennsylvania (Commonwealth).** Pennsylvania Emergency Management Agency (PEMA) is the agency that coordinates the execution of the Commonwealth's responsibilities and management of emergency services and resources. In accordance with the Pennsylvania Emergency Management Services Code (35 PA C.S.A. Sections 7101-7707) PEMA is authorized to assure

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-17
-----------	--------------------------	---	---	------	---------

the prompt, proper and effective discharge of the Commonwealth of Pennsylvania's responsibilities relating to disaster preparedness, response and recovery. The PEMA Director is the State Coordinating Officer responsible for coordinating and supervising the Commonwealth's and local government's response efforts in any disaster impacting the Commonwealth and its political subdivisions, including those following a Presidential Declaration of an emergency or a major disaster.

Direction of disaster emergency management services is the responsibility of the lowest level of government affected. When two or more political subdivisions of a county are affected, the county organization exercises responsibility for coordinating and support to the area of operations. When two or more counties are involved, coordination is provided by PEMA. To carry out this function, PEMA may utilize the services and facilities of all existing agencies of the Commonwealth and its political subdivisions.

The County Emergency Management Coordinator is responsible for coordinating SAR activities within his/her county. PEMA will coordinate State assistance to Federal SAR missions (i.e., a marine disaster on the Delaware River) upon request. In order to provide effective and timely direction, PEMA must be notified (Eastern Region, 610 562-3003 or 1-800-372-7362) immediately upon declaration of a Level II or III incident. Once notified, PEMA will implement its own notification system, coordinate support and send a liaison officer to the incident Command Post to act in concert with the local Incident Commander and the Coast Guard COTP.

8220.3 Local Policy.

Existing statements of understanding between the Coast Guard and the States of New Jersey and Delaware and the Commonwealth of Pennsylvania indicate that there is a joint responsibility within their respective areas of jurisdiction for search and rescue. As such, these legal agreements establish a framework where search and rescue operations can be quickly coordinated between the States' agencies and the Coast Guard so the most effective assistance will be rendered to those in distress in the marine environment, specifically in the Delaware River and Bay and near shore regions.

Mutual aid agreements are the most valuable means of assembling the manpower, equipment, and materials in the quantities that will be necessary to combat a major marine fire. These agreements are strongly encouraged. County emergency operations centers and Coast Guard, Commander Sector Delaware Bay are cognizant of resources and capable organizations that may have experience not normally found within fire departments, but may be crucial to the successful prosecution of a marine disaster or fire.

It is essential that both the County Emergency Operations Center and the Coast Guard Sector Delaware Bay's Command Center receive immediate notification of any marine fire. Standard operating procedures should ensure that each agency includes the other in their notification chain to ensure neither one is left out of the "information loop". In the

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-18
-----------	--------------------------	---	---	------	---------

event of search and rescue operations resulting from a marine disaster or fire the local policies of each state in the port area are as follows:

- **Delaware Counties and Municipalities.** Under “normal” operating circumstances, the designated fire and rescue unit will be in charge of the local response, using coastal rescue boats as appropriate. Other state agencies may respond (e.g., Delaware Natural Resources and Environmental Control (DNREC) Division of Fish and Wildlife), but under the provisions of the Delaware Fire Chief’s Law, they will normally remain subordinate to the direction and coordination of the local Fire Chief. If the scope of the rescue efforts grows beyond the coordination capabilities of the local Fire Chief, he/she has the option of turning over coordination to the respective county. In these cases, coordination efforts will normally be run through the county Emergency Management Center (or state EOC if the county chooses to elevate the level of coordination one step further). The county will normally rely on the availability of local rescue resources to actually carry out search and rescue efforts.
- **New Jersey Counties and Municipalities.** Coordination of SAR and fire activity in State waters under “normal” operating circumstances is the responsibility of the local jurisdiction. In most instances, this will be the local fire and rescue company with available water-borne resources. Local police may play a large part in the response. At a pre-designated level of response (e.g., third alarm), the county emergency management organizations are alerted, and the respective counties will step in and provide assistance and resources where needed. Unless the local Fire Chief relinquishes coordination of an incident, however, overall coordination responsibilities remain at the lowest level. In cases that are elevated above the local level, coordination efforts will normally be run through the county EOC.
- **Pennsylvania Counties and Municipalities.** Coordination of SAR and fire activity in State waters under “normal” operating circumstances is the responsibility of the local jurisdiction. In most instances, this will be the local fire and rescue company with available water-borne resources. Local police may play a large part in the response. At some predetermined level of casualties, county mass casualty plans are usually activated, and a county representative will report to the incident command post to assist coordination of resources as necessary. Unless the local Fire Chief relinquishes command of an incident, however, overall coordination responsibilities remain at the lowest level. In cases that are elevated above the local level, coordination efforts are run through the county EOC.
- **Waterfront Facilities and Vessel Masters.** In order to prepare for the occurrence of a marine fire, the Oil Pollution Act of 1990 (OPA 90) mandates that owners and operators of vessels and Marine Transportation Related (MTR) facilities identify response resources with firefighting capability. 33 CFR Part 154 requires MTR facilities that do not have adequate firefighting resources located at the facility or which cannot rely on sufficient local firefighting resources must identify and ensure the availability of adequate resources within

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-19
-----------	--------------------------	---	---	------	---------

twenty-four (24) hours. 33 CFR Part 155 requires that vessel owners and operators must identify salvage and marine firefighting services in their vessel response plans and set new response time requirements for each of the required salvage and marine firefighting services.

8230 Responsibility.

8230.1 Owner/Operator Facilities Responsibilities.

The owner/operator of a waterfront facility has a vested interest in the safety of the facility and cargo. In the event of a fire, prompt notification must be given to the local response agencies. The facility owner/operator may contact the local fire department by calling 911 or by contacting the local county Fire Dispatch Center (Fire Board) and Coast Guard Sector Delaware Bay. While this initial contact will begin the local notification process for an emergency response, a facility with firefighting capabilities on the facility would be best suited in most cases to extinguish the fire and prevent or limit its damage.

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 further have the responsibility of ensuring that their fixed firefighting systems are maintained according to established NFPA guidelines. Designated waterfront facilities, which are those facilities regulated by 33 CFR 126, are required to have an international shore connection for all those facilities receiving foreign vessels.

8230.2 Owner/Operator Vessels and Vessel Crew Responsibilities.

The master of a vessel has a vested interest in the safety of their vessel and cargo. In the event of a fire, prompt notification must be given to the local response agencies. The vessel master will contact USCG Sector Delaware Bay Command Center and may contact the local fire department by calling 911 or by contacting the local county Fire Dispatch Center (Fire Board). While this initial contact will begin the local notification process for an emergency response, the vessel's crew is best suited in most cases to extinguish the fire and prevent or limit its damage.

Under regulations promulgated on December 31, 2008, all applicable vessels that are regulated by 33 CFR 155, which are vessels that carry Group I-IV oils. Those vessels carrying Group I – IV oils and that are required to have a pre-approved salvage and marine firefighting resource providers contracted in their vessel response plan shall activate their plan.

33 CFR 155.4030 - Required salvage and marine firefighting services to list in response plans.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-20
-----------	--------------------------	---	---	------	---------

- Owner/Operator must identify, in the geographical-specific appendices of your VRP, the salvage and marine firefighting services listed in Table 155.4030(b) - Salvage and Marine Firefighting Services and Response Timeframes. **A copy of the Services and Response Timeframe can be found in Appendix F of this plan.**
- Additionally, you must list those resource providers that you have contracted to provide these services. You may list multiple resource providers for each service, but you must identify which one is your primary resource provider for each Captain of the Port (COTP) zone in which you operate.
- A method of contact, consistent with the requirements in 33 CFR 155.1035(e)(6)(ii) and 155.1040(e)(5)(ii), must also be listed, in the geographical-specific appendices of your VRP, adjacent to the name of the resource provider.

33 CFR 155.4030 - Other resource provider considerations.

- 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.
- Worker health and safety. Your resource providers must have the capability to implement the necessary engineering, administrative, and personal protective equipment controls to safeguard their workers when providing salvage and marine firefighting services, as found in 33 CFR 155.1055(e) and 29 CFR 1910.120(q).

The presence of local fire fighters does not relieve the master of command of, or transfer the master's responsibility for overall safety on, the vessel. However, the master should not normally countermand any orders given by the local fire fighters in the performance of firefighting activities on board the vessel, unless the action taken or planned clearly endangers the safety of the vessel or crew. The Master may also provide advice to the Incident Commander on the use of municipal personnel and equipment. The Master and crew (particularly the Chief Engineer) can also provide crucial information regarding the vessel's construction, cargo, and firefighting systems to the local fire department.

In port areas where a vessel is underway or at anchor and near the boundary between adjacent counties or cities, such that the exact location of the vessel is not easily determined, the Coast Guard shall fix, in consultation with the master or pilot, the position of the vessel in order to identify the appropriate fire response jurisdiction.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-21
-----------	--------------------------	---	---	------	---------

The Coast Guard may intervene, if necessary, to ensure that the vessel's actions are consistent with acceptable firefighting practices. In those cases, where the master's actions are imprudent and may cause further harm to personnel or other vessels in port, the Coast Guard shall take all necessary actions to prevent further harm or damage to personnel or waterfront property, including other vessels moored in vicinity of the vessel on fire.

8230.3 Fire Department Responsibilities.

Local fire departments are responsible for fire protection within their jurisdictions. In a number of jurisdictions, this responsibility includes marine terminals and facilities. Some terminals and facilities have in-house fire departments. In most cases, the terminal fire departments have entered into mutual aid agreements with the surrounding local fire departments. Typical responsibilities of local fire departments include:

- ☐ Assume position as Incident Commander for marine firefighting operations if the vessel on fire is moored to a shore side facility. Another situation in which the local fire department would assume the lead in the Unified Command would occur when a vessel that is underway, when the fire takes place and the master and vessel crew cannot handle the fire on their own.
- ☐ The Incident Commander(s) must immediately initiate incident size-up in order to develop strategy and tactics, and determine additional assistance that will be necessary. There will most likely be delay in assemblage and coordination of forces outside "normal" emergency response channels. Immediate response by that fire department which has jurisdiction, in order to assess the situation and to initiate actions to minimize the threat to life, should not be deferred during this sizing-up period.
- ☐ Dispatch necessary personnel and equipment.
- ☐ Determine the need for and request mutual aid, such as fireboats and appropriate medical aid.
- ☐ Work within the Unified Command to coordinate all other aspects of the response, including waterside security, landside traffic and crowd control, scene security, and evacuation.
- ☐ Provide portable communications equipment to response personnel from outside agencies.

8230.4 Commercial Firefighting and Salvage Organizations Responsibilities.

Resource providers that have been contracted by a vessel owner / operator IAW 33 CFR 155 Subpart I – Salvage and Marine Firefighting will be required to ensure their organization can meet the response times for salvage and marine firefighting service that they are contract for. The timeframe starts when anyone in your response organization receives notification of a potential or actual incident. It ends when the service reaches the

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-22
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ship, the outer limit of the near shore area, the outer limit of the offshore area, the 12 or 50-mile point from the COTP city, or a point identified in your response plan for areas OCONUS. The end points are listed in Table 155.4040(c) – Response Timeframe End Points. **A copy of the Response Timeframe Ends Point can be found in Appendix F of this plan.**

8230.5 Coast Guard Responsibilities.

The COTP controls the movement of ships and boats, establishes safety zones, and provides on-scene forces for all aspects of Marine Safety and Security within the COTP Delaware Bay AOR. Responsibilities of the COTP in a major fire aboard a vessel or at a waterfront facility include:

- ☐ Assume IC for burning vessel underway or at anchor when:
 - The fire department with jurisdiction is unable to respond or
 - No fire department has jurisdiction.
- ☐ Act as a member of the Unified Command, while providing the local municipality in the UC with technical assistance in shipboard firefighting, including:
 - Utilization of shipboard firefighting equipment
 - Vessel and cargo handling expertise
 - Ship's construction and stability
 - Determining whether to fight the shipboard fire or focus on protection of shore side infrastructure.
- ☐ Establish safety or security zones, as necessary.
- ☐ Provide information on involved waterfront facilities.
- ☐ Provide information on the location of hazardous materials on the vessel or at the facility, if available.
- ☐ Respond to oil or hazardous materials discharges. **Actual removal may be delayed until the firefighting operations are terminated.**
- ☐ Obtain resources to assist in relocating moored or anchored vessels
- ☐ Alert owners/operators of terminals or vessels at risk
- ☐ Provide interoperable communications equipment to response personnel, as needed and available.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-23
-----------	--------------------------	---	---	------	---------

COTP Delaware Bay will respond to calls for assistance and also advise local firefighting authorities on stability and salvage. The local community cannot rely on Coast Guard assets as the *primary* firefighting resource. Through his/her broad federal authorities to assure safety of the port and the environment, the COTP will convene a Unified Command to constantly monitor all activities involved in responding to the marine fire event, support the local Fire Chief as forward incident commander and develop an integrated response plan. Senior representatives from assisting departments/agencies should comprise the Unified Command for consultation to determine options and methods to conduct a coordinated response. The county emergency operations center (EOC) provides an excellent central location for joint agency responses.

For SAR operations, the largest CG vessel on scene, or as directed by COTP, will assume On-Scene Commander and will act as the command and control platform. Upon the conclusion of rescue operations, an assessment will be made by the Unified Command as to the continued need for all units on scene. The operations now shift to firefighting, salvage, and support of the safety zone (if established). The Unified Command will then prioritize those and other needed functions as needed with the designated Fire Chief responsible for all firefighting functions. The Unified Command will establish a Joint Information Center.

8230.6 State and County Emergency Management Responsibilities.

The State or County Emergency Management Agency is the state or local agency responsible for coordinating federal, state, local, voluntary and 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.

8300 PLANNING AND RESPONSE MANAGEMENT CONSIDERATIONS.

8310 Levels of Response.

The Philadelphia area and the various cities, ports and harbors that border the Delaware River and Bay comprise one of the busiest marine and airborne transportation zones in the United States. Commercial enterprises such as dinner cruises, tour boats, and commuter ferries are commonplace on the river. Air traffic is of great concern with numerous flights arriving at and departing from Philadelphia International, New Castle County (Wilmington, DE), and Atlantic City International Airports, as well as from the numerous smaller local airports, each day.

Not all marine disasters or fires require the full response set forth within this plan; a tugboat fire would not require the same level of response as would a passenger vessel colliding with a tank vessel, resulting in both vessels catching fire. Lesser emergencies obviously will not require a full organizational effort. The following parameters can be used as a guide by responding fire departments and others in the port in classifying the threat:

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-24
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- **Level I** - A marine disaster involving a smaller vessel or a facility that does not pose a major threat to the harbor. This level of disaster can usually be handled by one fire department on the local level with minimal waterside support. Minimal state and federal assistance will be required. The Coast Guard shall be notified in accordance with this plan and in most cases will send a representative to the scene.
- **Level II** - A marine disaster on a vessel or facility that has the potential to be a significant risk to the port. This level of disaster may involve the extra alarm response of two or more fire departments, with mutual aid and waterside support requiring the coordination of county fire dispatch centers and state emergency management agencies (EMAs). A Command Post will be established by the responding fire department and notification to the county Emergency Operations Center and the Coast Guard will be made in accordance with this plan.
- **Level III** - A marine disaster of major proportions, posing a high risk to the ports. This may evolve from a Level II fire and should be anticipated. It will involve the extra alarm response of many fire departments, with mutual aid and extensive waterside support, requiring the coordination of county fire dispatch centers and state EMAs. A Command Post will be established by the responding fire department and notification to the county Emergency Operations Center and the Coast Guard will be made in accordance with this plan.

8320 Basic Planning Considerations.

8320.1 Incident Notification.

Once the notification of a marine disaster has been received it is important that the receiving agency, whether it be a local fire department, State / County EOC, or the Coast Guard, ascertain the necessary facts/data to correctly dispatch the needed resources contain the fire in a timely manner.

8320.2 Communications.

Pre-established interoperable and effective communications procedures are essential to the execution of a safe and successful fire, rescue, or hazardous materials response. The larger the incident the more agencies that are likely to be involved in the response. Pre-planning of incident communications procedures will significantly reduce many of the difficulties which may arise during firefighting operations.

Primary response communications with the Coast Guard will be via marine VHF radiotelephone. Responding units shall make initial contact with the Coast Guard by calling for "Sector Delaware Bay" on Channel 16 VHF-FM (156.8 MHz). The Sector Delaware Bay Command Center (CmdCen) will then direct the responding unit to an appropriate tactical frequency. If communications with the Coast Guard on an assigned tactical frequency are lost, the responding unit shall reestablish communication on Channel 16.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-25
-----------	--------------------------	---	---	------	---------

Tactical frequencies for COTP Delaware Bay include VHF-FM Channels 21A (157.050 MHz), 23A (157.150 MHz), 81A (157.075 MHz), 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 and should have their radios programmed accordingly.

The primary USCG-public liaison channel is VHF-FM Channel 22A (157.100 MHz). Urgent marine information broadcasts are conducted on this channel. During a major incident, Channel 22A may be used to inform mariners of hazardous conditions or restrictions on the use of waterways.

Radio procedures should be followed, in accordance with Incident Command System protocols. Do not release over radio circuits the names of response personnel and civilians involved in the operation. All un-encoded radio communications are susceptible to monitoring by the media and the public.

Use of the ICS Communications Plan will assist in clarifying the communications policy for incidents. ICS 205 Incident Radio Communications Plan

VHF FM Channels:

CHANNEL	FREQUENCY SHIP (Mc/S)	COAST	POINTS OF COMMUNICATION	AUTHORIZED COMMUNICATION
6	156.3		Inter-ship/only	Safety
7A	156.35	156.35	Inter-ship & Ship to Coast	Business & Operational
8	156.4		Inter-ship/only	Business & Operational
9	156.45	156.45	Inter-ship & Ship to Coast	Business & Operational
10	156.5	156.5	Inter-ship & Ship to Coast	Business & Operational
11	156.55	156.55	Inter-ship & Ship to Coast	Business & Operational
12	156.6	156.6	Inter-ship & Ship to Coast	Port Operations
13	156.65	156.65	Inter-ship & Ship to Coast	Business & Operational Primary
14	156.7	156.7	Inter-ship & Ship to Coast	Port Operations Primary Waterside Frequency
16	156.8	156.8	Inter-ship & Ship to Coast	Safety/Calling International Distress
18A	156.9	156.9	Inter-ship & Ship to Coast	Business & Operational
19A	156.95	156.95	Inter-ship & Ship to Coast	Business & Operational
20	157.0	161.60	Ship to Coast	Port Operations
21	157.05		Inter-harbor	Secondary Waterside Frequency
22	157.01	157.1	USCG to Public	Government/ Public Liaison
24	157.2	161.8	Ship to Coast	Public Correspondence
25	157.25	161.85	Ship to Coast	Public Correspondence
26	157.3	161.9	Ship to Coast	Public Correspondence
27	157.35	161.95	Ship to Coast	Public Correspondence
28	157.4	162.0	Ship to Coast	Public Correspondence

8320.3 Actions Upon Notification.

Prompt notification of all parties who have a need to know a fire has occurred is of utmost importance. The COTP should use a comprehensive notification list to ensure all parties have been notified. Upon notification of a waterfront fire, the COTP shall immediately determine the vessels in the fire area and the cargoes they are carrying. The COTP shall notify local shipping agents of their vessels' involvement or possible involvement, and any anticipated need to move them. Coast Guard personnel should contact all vessels both in and outside the fire area and advise the deck watch officer of the situation and of the possible need to get underway.

8320.4 Use of Cleanup Contractors.

The COTP may find that local pollution cleanup contractors are not adequately equipped to conduct activities where fires are involved. Development of this capability should be encouraged, as the spread of flammable liquids may result in the spread of a fire.

8320.5 Involvement of Pilots.

Nearly all state pilotage laws require a pilot to be on board all large vessels moved within a port. The COTP should consider the pilotage laws when determining the need for pilots in emergency situations. Local pilots' associations should be contacted to determine their procedures for handling emergency movement of vessels and response times of their members to representative locations. If a fire is reported on board a vessel or at a grain elevator, oil terminal, or other high-risk facility, other vessels moored at that facility or near the involved vessel may have to be moved immediately, with or without tugs or pilots; this may be accomplished, if necessary, through a COTP Order.

8320.6 Involvement of Salvors And Marine Chemists.

Salvors and marine chemists have a variety of unique skills which may be of use in a marine fire incident. A marine chemist tests the atmosphere of confined and poorly ventilated spaces for concentrations of oxygen and other gases which may be harmful, flammable, or explosive. During a marine fire, marine chemists can monitor conditions of an interior fire area and advise responders of chemical hazards that may be encountered. Commercial salvors operate a variety of specialized equipment to keep a vessel afloat or raise a sunken vessel. Because many salvors deploy their assets within a large area of operations, local salvors may not be able to respond as quickly as a more remotely based company. The U.S. Navy Supervisor of Salvage also maintains personnel and equipment which may be available. The COTP or designee shall notify the PSAP(s) having jurisdiction for dispatching of USCG actions taken, resource(s) allocated for shore and marine response, estimated time of arrival of initial shore based and maritime units to the scene.”

8320.7 Involvement of Salvage Engineering Response Team (SERT).

The U.S. Coast Guard Salvage Engineering Response Team is available 24 hours each day to provide COTP's with technical guidance during marine firefighting incidents.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-27
-----------	--------------------------	---	---	------	---------

Staffed with Coast Guard naval architects, the Salvage Team has the experience, training, and tools to help the COTP manage and minimize the risks associated with the stability issues of the firefighting effort. The Salvage Team can address critical issues that arise during an incident, such as stability of the damaged ship, firefighting water discipline, lightering and ballasting sequences, and tug requirements. The Salvage Team can also evaluate residual strength, estimate the amount of oil spilled or consumed by the fire, and predict the effects of tides on a stranded vessel. The responsible party and commercial salvor will address these issues as they develop their salvage plan; when it is prepared, the Salvage Team can provide the COTP a crucial independent assessment.

8320.8 Involvement of Marine Fire Fighting Task Force (MFFTF).

The Incident Commander/Unified Commanders should consider the activation of the MFFTF and assistance from outside existing mutual aid agreements for Level II and III incidents. The MFFTF will be comprised of all holders of the plan, the Federal Emergency Management Agency (Region II & III), the three Emergency Service Directors of the State Emergency Management Agencies, and various local emergency response agencies. COTP Delaware Bay will be in the best position to assist in coordinating the response of the Tri-State Maritime Safety Association (TMSA) and execute his/her broad authority as situations may require for SAR, vessel/port safety, and pollution response.

TMSA promotes partnerships between local responders and the maritime community for regional maritime emergency preparedness within Delaware, New Jersey and Pennsylvania, including the Delaware River Basin, Delaware and New Jersey Coastal Areas, and Nanticoke River area. They will provide the Incident Commander / Unified Commanders with information and may make recommendations as to appropriate strategy and tactics. The regional Key Technical Advisors (KTAs) are members of the port community identified and recruited by the MFFTF and TMSA and compose the Technical Assist Team (TAT). They possess technical and firefighting expertise that would be useful during the mitigation of a marine disaster.

A state, county, or city may also designate local KTAs for coordination, liaison, training, etc. to assist the local Incident Commander and work with the MFFTF and the Regional KTA's. Assembly of locally designated KTAs remains the responsibility of those state, county, or city organizations that would respond to marine fires/disasters.

8320.9 Involvement of Assist Tugs.

In nearly all marine fire situations, tug companies should be contacted early in the planning phase to evaluate their capability and willingness to provide towing assist services to burning ships.

8320.10 Involvement of U.S. Army Corps of Engineers.

The U.S. Army Corps of Engineers (USACE) under the authority of DOD Directive 3025.1 (Military Support to Civil Authorities), the local commander in Philadelphia, can use all assets under his/her control to save lives and protect property, which would be of

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-28
-----------	--------------------------	---	---	------	---------

great use in a marine disaster/fire. As per the Interagency Agreement between U. S. Coast Guard Captain of the Port, Philadelphia, now Sector Delaware Bay, and the Army Corps of Engineers Philadelphia District, dated 9 December 1997, the USACE offered to provide tugs, barges, and equipment to assist the Coast Guard in fighting marine fires. The barges would be used at platforms to stage skid-mounted pumps with 2000 GPM capacity, tote bins of foam, 2000 GPM deluge guns, and personnel.

The assets of the USACE would be made available in the event that the Incident Commander/Unified Commanders informs the Coast Guard that the incident has exceeded the resources that could be provided through mutual aid. Since major marine fires have the potential for the discharge of oil or the release of hazardous substances funding to cover the costs and expenses of the USACE can be requested from the National Pollution Fund Center by the Federal On-Scene Coordinator (FOSC), which would be the Coast Guard in the event of marine fires.

8330 Response Management Considerations.

The area comprising the Coast Guard Sector Delaware Bay Zone encompasses the coastlines of three states; New Jersey, Delaware, and Pennsylvania. Central to the zone is one of the major United States waterways, the Delaware River and Bay, which is a maritime artery whose economic life is vital to the tri-state region and the nation.

The shorelines comprise a diversity of occupancies and activities. They include seashore vacation homes and beaches, full-time residential communities, various types of industry, petroleum and chemical processing plants with their associated waterfront facilities, and maritime terminals that handle various commodities. Rail lines, road arteries, airports, and pipelines are also an integral part of the port complex.

The location in which the disaster occurs (i.e., marsh, isolated areas) impacts the availability of units to reach the scene, limits the amount of triage sites, access roads, and/or landing sites for aircraft. The upper reaches of the Delaware River are fully developed and benefit from a larger concentration of available SAR and firefighting resources to respond to marine disasters and fires. Conversely, there is less development and fewer SAR and firefighting resources in the lower Delaware River and Bay, and responses to a marine disaster or fire in this locale will be impacted accordingly. An air resource (e.g., a helicopter from Coast Guard Air Station Atlantic City or a state, county, or local agency) may be the only government unit on scene for a considerable amount of time in the lower reaches of the river and bay.

Coast Guard designated waterfront facilities handle flammable/combustible liquids or other hazardous materials and are federally regulated. They are described in 33 CFR 126.05. A listing of the facilities can be found in the Sector Delaware Bay Area Contingency Plan (ACP), Maps, Facility Overflight section and contains aerial photographs, locations, and brief descriptions of the facilities. Detailed information about environmentally sensitive areas, including wildlife is described in the ACP, Maps, Environmental Sensitive Maps section. Maritime activity in the zone is extremely busy; recreational boating, commercial

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-29
-----------	--------------------------	---	---	------	---------

fishing, and various other small marine enterprises share the waterways with all types of oceangoing vessels, tank-barges and tugs.

Accidents can be varied in nature and can include incidents such as facility/vessel fires, explosions, collisions, or vessel groundings. Any one of these may threaten both the immediate area and possibly far-reaching areas of the port. The entire area, along the shore and out on the waterways, is highly vulnerable to the risk of fire. This can range from a small incipient blaze to a fire with potential to become a catastrophic marine casualty.

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, heavy winds, low ceiling, 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. All federal, state, county and local resources should ensure that any

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-30
-----------	--------------------------	---	---	------	---------

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. Many local fire and rescue department small boats normally operate in more sheltered waters such as creeks/estuaries and relatively protected operating environments.

- **Pollution.** The presence of oil, fuel, or chemicals in the water will reduce the time that persons will be able to remain in the water without suffering the effects of ingestion, inhalation of fumes, external burns, and eye, nose and irritation.
- **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 Incident Commanders must realize that delay may be encountered in having requested resources on-scene. Any resources determined to be necessary by the incident commander 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.

8330.1 Access for Firefighting.

Few disasters provide optimal circumstances. A facility fire may occur in a little used warehouse space where access is difficult. 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. Facility fires must be fought at the scene and in most cases, vessels which are moored will remain at their location to allow local fire departments to combat the fire. 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.

- The COTP has final authority in:
 - Ordering/allowing movement of a burning ship;
 - Creating accesses or penetrations into a hull of a ship or other issues involving hull integrity;
 - Opening flooding boundaries or other issues involving stability.

8330.2 Port Entry and Movement of a Burning Vessel.

Essential Considerations. The decision to allow a burning vessel to enter or be moved within the port can be a difficult one for 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. The port should not be jeopardized to save a single vessel if the risk is too great. Risk evaluation (and cost-benefit analyses where applicable) should be employed during the planning process. The primary considerations for allowing a burning vessel to enter into, or be moved within, the port predicated on the three primary strategic objectives. These are Life Safety, Incident Stabilization, and Property Conservation are:

- ☐ Location and extent of fire;
- ☐ Class and amount of cargo involved;
- ☐ Possibility of explosion;
- ☐ Possibility of sinking/capsizing;
- ☐ Hazards to crew or other resources at present location;
- ☐ Weather forecast;
- ☐ Maneuverability of vessel (Is it a dead ship?);
- ☐ Effects on bridges that must be transited
- ☐ Hazards to the environment; and
- ☐ Alternatives if the vessel is not allowed entry or movement.

8330.3 Allowing Entry or Movement of the Vessel.

Before entry or movement is permitted, the vessel should be examined (with other involved agencies, if possible) to determine its condition. Permission for entry or movement may generally be granted when:

- ☐ The fire is already contained or under control;
- ☐ There is little likelihood that the fire will spread;
- ☐ A greater possibility exists that the fire may be extinguished with equipment available in-port before secondary explosion or spread of fire; and

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-32
-----------	--------------------------	---	---	------	---------

- ☐ All appropriate parties, including elected officials, have been consulted and informed including public notification of decisions and actions to be taken through the UC or Liaison Officer.

[NOTE: A request for entry into the port by a burning vessel under declaration of "force majeure" should be evaluated under the same previously listed criteria.]

8330.4 Additional Considerations Prior to Entry or Movement.

Once the decision to permit entry or movement of the vessel has been made, consideration should be given to:

- ☐ A safety broadcast and Notice to Mariners;
- ☐ Ordering the movement of other vessels or cargo stored in the area to preclude their involvement; and
- ☐ Locating the vessel to facilitate the use of available resources in firefighting.

8330.5 Firefighting Pier/Anchorage Selection

Prior to selecting a firefighting pier, certain considerations should be taken into account:

- ☐ The pier shall be of non-combustible construction;
- ☐ The location of the pier shall not place adjacent areas or vessels in danger given prevailing winds, weather, and other climatic conditions.
- ☐ The area shall be of sufficient size to logistically support an Incident Support Base(s), Staging Area(s), and personnel Rehabilitation sites
- ☐ Public access shall be controlled;
- ☐ The depth of the water alongside the pier shall be sufficient enough at low tide to allow for the navigation of small craft such as tugs and barges but not so deep as to cover the vessel's main deck in the event of sinking.
- ☐ The bottom contour shall be level, and if possible be of a sandy composition. A sloping bottom may allow a sunken vessel to slide off into deeper water, where it might capsize.

The considerations for the selection of a fire-fighting pier may also be applied to a fire fighting anchorage. An additional requirement is that the anchorage be located so as not to constitute a hazard to navigation. In each situation, the objective is to select a location that will be as accessible as possible while not placing port facilities in jeopardy, yet at the same time facilitate salvage operations.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-33
-----------	--------------------------	---	---	------	---------

The locations listed below generally meet the criteria for use as firefighting piers and anchorages and could be used as such if conditions permit. The local fire department having jurisdiction is shown in parenthesis.

- (1) **Tioga Marine Terminal**
Container / Break Bulk Facility - Philadelphia
(MLW) 40' (Chart 12313)
(Philadelphia Fire Dept.)
- (2) **Port Richmond Pier #11**
Break Bulk Facility - Philadelphia
(MLW) 40' on south side (Chart 12313)
(Philadelphia Fire Dept.)
- (3) **Greenwich Terminal (Packer Marine)**
Container / Break Bulk Facility - Philadelphia
(MLW) 40' (Chart 12313)
(Philadelphia Fire Dept.)
- (4) **Philadelphia Naval Business Center**
(Port of Philadelphia & Camden Cruise Terminal) - Philadelphia
Cruise Terminal
(MLW) 25', foot of Broad St (Chart 12313)
(Philadelphia Fire Dept.)
- (5) **Beckett Terminal (South Jersey Port)**
Break Bulk Facility - Camden
(MLW) Berth 1 & 2: 30' 3: 35' 4: 40' (Chart 12313)
(Camden Fire Dept.)
- (6) **Penn Terminal**
Container / Break Bulk Facility - Chester
(MLW) 35' (Chart 12312)
(Chester City Fire Dept.)
- (7) **Port Of Wilmington Terminal**
Container / Break Bulk Facility/ Roll on/Roll off - Wilmington
(MLW) 35' - 38' (Chart 12312)
(Wilmington Fire Dept.)
- (8) **Anchorage A “Bigstone” - Delaware Bay**
(Slaughter Beach & Lewes Fire Dept.) (Chart 12304)

8330.6 Liability Factors in Consideration of Vessel Entry.

- ☐ The amounts and types of insurance held;
- ☐ Verification of coverage for liability for any oil pollution removal costs, as evidenced by a valid Certificate of Financial Responsibility (COFR);

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-34
-----------	--------------------------	---	---	------	---------

- ☐ Liability insurance for possible damages caused to other property;
- ☐ A surety bond, in an amount equal to the estimated cost of removing the vessel from the port.

[NOTE: While these assurances are highly desirable, obtaining them may not be possible before action is required to save the vessel.]

8330.7 Considerations for Denying Entry or Movement.

- ☐ A danger, greater than the immediate danger to the vessel, crew, or cargo, which the fire will spread to other port facilities or vessels;
- ☐ A likelihood of the vessel sinking or capsizing within a navigable channel;
- ☐ A likelihood that the vessel may be abandoned as a derelict;
- ☐ Unfavorable weather or environmental conditions that preclude the safe movement of the vessel or firefighting efforts; and
- ☐ A risk of a serious pollution incident of oil or hazardous substances. The COTP should, in conjunction with district staff and the Regional Response Team (RRT), assess pollution risks and determine whether a vessel should be allowed to enter port.

8330.8 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 fire-fighting 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 fire-fighting 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.

- ☐ **Coast Guard Offshore Resources.** During an offshore fire, ships and aircraft become important resources. Aircraft may provide a timely source of information during the early stages of a response and can be used for personnel or equipment transfers. Coast Guard vessels are limited in their ability to assist in a shipboard fire, but are much better equipped than commercial vessels and have damage control teams that are drilled regularly in shipboard fire-fighting. In addition to improving communications, larger Coast Guard vessels with flight decks can be used to stage equipment flown to the scene. Strike Force personnel and

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-35
-----------	--------------------------	---	---	------	---------

equipment can be useful in dewatering evolutions. All requests for Coast Guard equipment (including ships and aircraft) and supplies, whether from within the COTP Delaware Bay area or not, should be directed to the Fifth District Command Center.

- **Department of Defense Offshore Resources.** Fire-fighting equipment may be available from various Department of Defense (DOD) sources. In addition to the transportation capabilities discussed there, DOD aircraft and vessels can be invaluable in an offshore fire situation for the same reasons discussed for Coast Guard assets. The possibility of Naval or Army Corps of Engineers vessels operating in the vicinity which can assist should not be overlooked. All requests for DOD assistance should be made to the DOD representative on the Regional Response Team, via the Chief of Prevention of the Fifth Coast Guard District.
- **Other Offshore Resources.** Any ship becomes a valuable resource during an offshore vessel fire, even those with small crews and minimal fire-fighting capability. At a minimum, another vessel can provide a means of escape for a burning vessel's crew should their efforts to control the fire fail. Vessels in the area may be notified of a situation via AMVER or with a Broadcast Notice to Mariners. Tug companies in the vicinity may assist in fighting the fire, moving a dead ship or transporting equipment. While few vessel operators would be reluctant to assist in a life-threatening situation, vessel owners may not be willing to respond to a fire-fighting situation that could risk their vessels or crew in order to protect a ship or cargo once the crew is safe.
- **Offshore Scuttling Area Selection.** If a vessel cannot be safely moved to a port, and it is possible that the vessel and cargo could be lost (either intentionally or not) the vessel should be moved to an area where environmental damage will be minimized. The information in this section should be reviewed to identify the best area to move the vessel. The Environmental Protection Agency should also be consulted on any decision concerning scuttling of a vessel. Scuttling must be conducted IAW COMDTINST 16451.5 and 40 CFR 229.3.

8330.9 **Firefighting on Vessels.**

- **Importance of Vessel Location.** The success or failure of shipboard firefighting efforts is a condition of the vessel's location; if the vessel is remotely located or otherwise inaccessible, there may be little opportunity to save it. The COTP should coordinate with fire departments, port officials, and other involved agencies to pre-select moorage, anchoring, or grounding sites for burning vessels.
- **Considerations For Moorage Locations.**
 - The flammability of pier structures and contiguous facilities;
 - Availability of adequate water supply;
 - Access for response boats and vehicles;

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-36
-----------	--------------------------	---	---	------	---------

- Minimizing the risk of impeding navigation;
- Location of low risk to facilities or vessels, consistent with minimizing the distance the vessel must be moved.

□ **Considerations For Anchoring or Grounding Locations.**

- 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.

- **Intentional Sinking Of Vessels.** As a last resort when a vessel and its cargo are deemed to be a constructive total loss due to a fire, an alternative to further firefighting and salvage efforts may be to sink the vessel. Transportation and disposal of vessels must be accomplished in accordance with COMDTINST 16451.5 series, which provides guidance concerning the Intervention on the High Seas Act (IHSA), and 40 CFR 229.3, which outlines authorities and general procedures. Except in extreme emergencies when vessel disposal is contemplated as a viable option, the vessel's flag state, EPA's Regional Response Team (RRT) representative, and other parties known to have interests which may be affected should be consulted.

8330.10 (U) **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.

- **Consulting Personnel.** The COTP or his/ her designee may be expected to provide advice regarding vessel stability issues and should command a basic knowledge of the topic. The Coast Guard Marine Safety Center Salvage Team is always available to provide technical guidance on stability issues. At a minimum, Sector Delaware Bay Marine Firefighting Taskforce personnel who are likely to respond in incidents where stability of a vessel is at issue should be familiar with NFPA 1405 and Lee Van Germert, published by Cornell Maritime Press. Stability And Trim For The Ship's officer, by John La Dage
- **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 plan, the docking plan, the

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-37
-----------	--------------------------	---	---	------	---------

capacity plan, and the general arrangement plan. If this information is for some reason not available on board the vessel, it should be available from the vessel's owner or operator. Ideally, Coast Guard and/or local fire fighters would maintain copies of the pre-fire plan for those vessels which regularly call at their port. 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.

8330.11 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.

- **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.
 - The indiscriminate use of water, however, 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 answered before proceeding.
 - At best, indiscriminate water usage may precipitate excessive water damage and disrupt the thermal balance of an interior fire resulting in reduced visibility, and severe heat conditions from the production of large amounts of steam. The thermal balance is the discernible separation between the heated fire gases in the upper portion of a compartment and the relatively cooler air below. The heated gases may exceed 704° C (1300° F).
 - Disruption of the thermal balance can be avoided for as long as possible by proper application of direct and indirect attack techniques.
 - In the worst case, disregard for the amount of water put on board will deteriorate the vessel's stability. Four liters (1 gal) of sea water weighs 3.9 kg (8.6 lbs.); at a flow rate of 6 liters/second (L/s) or 100 GPM, a 1 M2 (12 ft2) space will be flooded 0.152 mm (6 in) in roughly 5 minutes, adding approximately 2 metric tons (2 tons). A 64 mm (2 1/2 in) hose, which is commonly found on vessel weather decks, delivering 2 L/s (250 GPM), equates to approximately 54 metric tons (60 tons) per hour; while the 38 mm

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-38
-----------	--------------------------	---	---	------	---------

(1 1/2 in) hose normally found at interior fire stations will deliver approximately 27 metric tons (30 tons) per hour.

8330.12 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.

8330.13 Vessel Factors Affects Stability.

- ☐ The free surface of all liquids on board,
- ☐ The integrity of the hull,
- ☐ Whether the double bottoms are empty or full,
- ☐ Integrity of watertight boundaries during flooding, and
- ☐ Flatness of the hull bottom if the vessel is in contact with the bottom.

8330.14 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. Normally, vessels will have a limited amount of dewatering equipment. This equipment will often consist of a fixed pump and suction system to handle water which accumulates in the vessel's bilges and drain holes located in areas above the waterline to allow drainage overboard or into the vessel's bilge.

- ☐ Portable pumps are sometimes available on board, but their limited capability will not substantially aid dewatering efforts. Removal of toilets and showers to improve drainage will allow water to flow down into holding tanks below the waterline. While the weight of the water is still a factor, the shift in weight to the holding tanks will lower the vessel's center of gravity and improve transverse stability.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-39
-----------	--------------------------	---	---	------	---------

- ☐ In extreme cases, drainage holes may be cut in the superstructure. This practice, however, can be extremely dangerous and should not be pursued without the permission of the owner or other appropriate authority.
- ☐ In planning for the eventuality of a dewatering effort, consideration must give to the quality of water being discharged and the need for containment.

8330.15 List Correction.

The basic causes of list are a negative metacentric height (GM), or "angle of loll", which is caused by having the center of gravity too high in the vessel, and/or an off center position of the vessel's center of gravity (CG). When in doubt as to the cause of the list, always attempt to lower the vessel's center of gravity. The following outlines a general sequence of actions to limit deterioration and potentially improve vessel stability:

- ☐ Establish flooding boundaries,
- ☐ Remove water from partially flooded areas,
- ☐ Jettison topside weight,
- ☐ Completely remove water from solidly flooded areas,
- ☐ Transfer weight (usually liquid ballast). If the list is caused by a location of the center of gravity off the vessel's centerline, shifting weight to the high side will remove the list, however, if negative GM is a factor of the list, transverse shifting of weight within the vessel will worsen the situation. In a case in which the center of gravity is located above the metacentric height, the center of gravity must be lowered to correct the list.
- ☐ Add weight (counter flooding). Always start with the lowest spaces available, such as double bottom tanks. Never counter flood if free surface is the cause of the list. Problems resulting from added weight and free surface effect make counter flooding a last resort.

8340 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.

8350 Marine Transportation System (MTS) Recovery.

Sector Delaware Bay (SecDelBay) Marine Transportation System (MTS) Recovery Plan is a standalone plan that was developed to support the AMS Plan, ACP, and various

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-40
-----------	--------------------------	---	---	------	---------

other contingency plans. The MTS Recovery Plan lays the foundation for and supports facilitation of MTS recovery but relies on the ICS process for planning and conducting actual recovery operations.

The most current version of SecDelBay MTS Recovery Plan will be posted on the secure side Sector Delaware Bay HOMEPORT <http://homeport.uscg.mil/delawarebay>.

8360 Salvage Response.

Sector Delaware Bay Salvage Response Plan (SRP) as required by the SAFE Port Act of 2006 has been included in Annex 10200 of SecDelBay Area Maritime Security (AMS) Plan. The annex has been published as a separate document that was developed to support the AMS Plan, ACP, and various other contingency plans. This annex provides a post-Transportation Security Incident (TSI) planning and coordination framework for salvage response activities needed to facilitate the recovery of the United States (U.S.) Marine Transportation System (MTS) and to support the clearing of the port navigation system in waterways to enable the resumption of maritime commerce in the Captain of the Port (COTP) Delaware Bay Zone.

(The most current version of Annex 10200, Sector Delaware Bay AMSP Salvage Response Plan (SRP) will be posted on the public side of Sector Delaware Bay HOMEPORT <http://homeport.uscg.mil/delawarebay>

8400 OPERATIONAL RESPONSE ACTIONS AND ORGANIZATION.

8410 Notification and Interagency Coordination.

Initial notification that a marine disaster has occurred may come from any number of places, including the stricken vessel or aircraft, other vessels or aircraft in the vicinity, the Federal Aviation Administration (FAA) Control Tower at the airport(s) or observers on the shore. Regardless of who receives notification of a marine disaster, whether it is a local PSAP fire department, state/county emergency operations center, or the Coast Guard, it is important that they ascertain the necessary facts and initiate action to ensure the appropriate emergency response, and immediately make the necessary notifications. **Example of a Marine Fire / Explosion Notification Form can be found in Appendix A.**

In case of a marine fire, the immediate notification of the appropriate County Public Safety Answering Point (PSAP) or County EOC is the first and most important step in mobilizing the necessary response. The County Fire Dispatch Center (or Fire Board), will notify the fire department(s) through which is part of the EOC, and/or emergency response unit(s) in whose jurisdiction the marine fire and/or disaster occurs.

The appropriate firefighting and / or emergency response unit(s) should be dispatched immediately. PSAP Center numbers are listed in Appendix B of this plan for Fire at a Waterfront Facility or Structure and Fire aboard a Vessel.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-41
-----------	--------------------------	---	---	------	---------

It is essential that USCG Sector Delaware Bay's Command Center also receives immediate notification of any marine fire and/or disaster. Standard operating procedures should ensure that each agency includes the other in their notification chain to ensure neither one is left out of the "information loop."

In the event of a Search and Rescue (SAR) mission, Sector Delaware Bay will immediately assume the role of the SAR Mission Controller, activating its pre-established area search and rescue network and dispatching appropriate Coast Guard units to the disaster site. It will also determine if any commercial or private vessels are in the area that may serve as potential SAR resources. If state, county, or municipal governments have assets readily available to assist, they will normally activate their respective emergency response networks, dispatching appropriate units to the scene. It is particularly important for the proper fire and rescue to be activated for the location and reported nature of the incident so that shore-side coordination can be established. Such a full-fledged activation of resources will ensure an adequate rescue response is initiated. However to ensure that federal, state, county and municipal rescue efforts remain focused and coordinated, the Coast Guard will normally assume tactical control of all search and rescue units made available for on-scene water rescue activities.

Upon arrival of the first response unit, the senior fire officer assumes Incident Command (IC), completes a size-up of the situation (Level of Response), determines the need for additional assistance, and reports conditions observed to their emergency operation center. The communication / operation center that received the report and initiated the response, upon confirmation by the first unit on scene of a marine fire/ emergency, must ensure that Coast Guard Sector Delaware Bay's Command Center is informed immediately through the SAR Controller (215) 271-4940 or 4960. The first response agency on-scene that assumed the IC may transfer IC duties to another agency that may have lead statutory authority to manage the marine disaster. Incident Commander should coordinate all resources on-scene to manage the incident. Some incident may require the establishing a Unified Command (UC). The IC/UC should identify and establish an Incident Command Post (ICP), there should be only one Incident Command Post coordinating all efforts except SAR.

Depending on the nature of the marine disaster or fire, the state, county and / or local jurisdiction may activate their respective emergency operations centers. Response resources will normally coordinate their activities or request for assistance and/or mutual aid, e.g., additional fire companies, fire boats, utility boats, ambulances, foam pumpers, staging areas, triage areas, medevac areas, arrange for transportation of casualties to the appropriate medical facilities, etc., with their emergency management organizations, or directly with their representatives in the Unified Command at the Incident Command Post, as appropriate.

8420 Command and Control.

Under the Incident Command System (ICS), the Incident Commander assumes overall command and control of the incident response. Other responding agencies will, within limits of operational capabilities and internal policy, provide support to the Incident Commander by providing personnel, equipment and technical expertise. The location of

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-42
-----------	--------------------------	---	---	------	---------

the fire will be the primary determining factor in determining who shall be Incident Commander or the lead agency in a unified command. If the fire is at a facility, or on a vessel at a facility, the local fire department shall be Incident Commander or lead agency.

If the vessel is underway or at anchor, Incident Commander is the Coast Guard COTP, until such time the vessel is brought to and secured at a pier, then Incident Command shall shift to the local fire department with concurrence between COTP and the fire department. If a vessel at a pier is subsequently moved, Incident Command shall shift from the fire department to COTP, or to the receiving fire department, again with concurrence between COTP and the fire departments.

For a more general description of the Incident Command Structure and position responsibilities, refer to the Area Contingency Plan, Sections 2000 through 6000 and for specific description, refer to USCG Incident Management Handbook, Chapter 21 Marine Fire.

8430 Unified Command.

A Unified Command (UC) structure will be established when the plan needs to be fully implemented, which cross geographic boundaries, involves various governmental levels (e.g., federal, state, local), impact functional responsibilities (e.g., search and rescue, fire, oil spill, EMS). The UC is based on the National Incident Management System (NIMS) and is intended to provide the “common ground” necessary to jointly coordinate command and control over a large number of response agencies that cross multiple jurisdiction boundaries.

The UC is designed to bring together continuous decision making input from response groups at every level: municipal, county, state, federal, and the commercial community. Each response agency will normally participate in the UC at the appropriate decision making level.

The Unified Command will be normally staffed by state or county level personnel, in the event of a marine fire however, the Fire Chief of the fire company handling the incident, or his/ her representative, will be involved in the Unified Command. At a minimum, the UC should be comprised of Coast Guard, vessel / facility owner or representative, state / county emergency management representatives and other federal response agencies.

The very fact that this plan has been implemented implies that a disaster or fire is of significant magnitude. As the scope of the disaster or fire grows, each agency is expected to inform their respective ICS support structures, which in turn is expected to activate and delegate the appropriate command staff, general staff and resources to manage the incident.

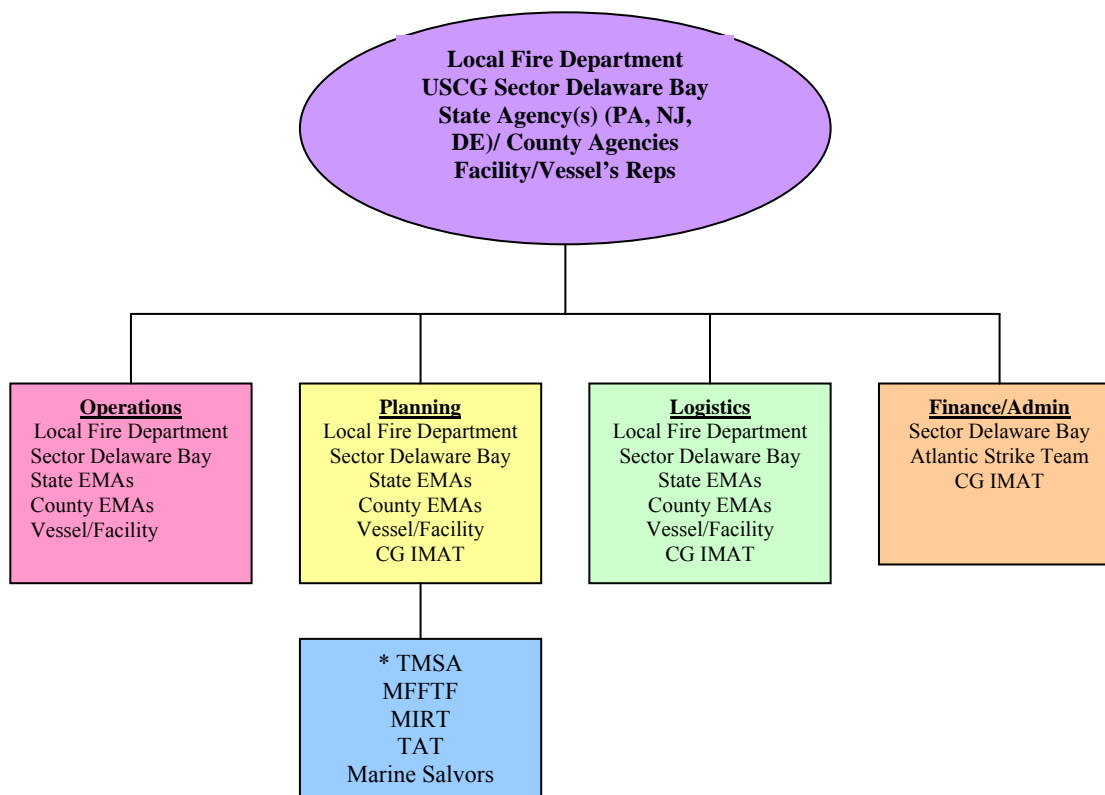
The “scale up” just described is typical of ICS, i.e., as the size or complexity of the response increases, the organizational elements become more discrete and the span of control increases, the control of the supervisors should be reduced so that the effective command and control can be maintained. Each organization in the UC is expected to “scale up” as appropriate. As with all matters under UC, the Unified Commanders will

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-43
-----------	--------------------------	---	---	------	---------

determine if the degree of organizational development and “scale up” is adequate and appropriate for the disaster response. Such a “scale up” may ideally describe a scenario that initially involves people in the water but later grows to a situation that includes both a shipboard fire and discharge of oil.

8430.1 Organizational Chart.

Shown below is the organizational chart to identify and clarify lines of authority of the port's Unified Command/Emergency Response community.



**Resources that can provide advice and/or technical assistance to the Unified Command:*

TMSA (Tristate Maritime Safety Association) - composed of the Marine Fire Fighting Task Force (MFFTF) which is instrumental in planning, the MIRT, and Tri-State Search and Rescue (TriSAR). TMSA provides technical advice and expertise in marine firefighting and safety.

MIRT (Maritime Incident Response Team) - a subcommittee of TMSA - composed of the Operations Support Team (OST) and Key Technical Advisors (KTA) which compose the TAT, provides operational and technical support to the Coast Guard and other agencies.

TAT (Technical Assist Team comprised of Key Technical Advisors (KTA)) - are primarily volunteers that have expertise in Naval Engineering, Marine Chemists, Marine Architects, Facility Operations, Vessel Operations, Admiralty Law, Environmental

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-44
-----------	--------------------------	---	---	------	---------

Response, and other related functions that may be critical to operations in support of TMSA and/or the local commander.

8440 **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 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 firefighting systems are usually the best method for extinguishing a fire on a vessel. These systems include;
 - (1) **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.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-45
-----------	--------------------------	---	---	------	---------

- (2) **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 of about 757 liters at 103 kPa (200 gallons at 15 psi).

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.

- (3) **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. CO₂ 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.

- (4) **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

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-46
-----------	--------------------------	---	---	------	---------

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.

- (5) **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.

- (6) **Steam Smothering Systems.** The steam is supplied by the ship's main or auxiliary boilers for use in cargo tanks/holds, pump rooms and bilge fire suppression. This system may be present on some older vessels, however, steam smothering cannot be installed on any US flag vessel contracted after 1 JAN 62 and is generally no longer an accepted method of shipboard fire suppression.

Other than the heat hazard for personnel, the use of steam as a smothering agent can easily hinder firefighting efforts rather than help. By its nature steam has very little cooling effect and is often a high enough temperature to ignite some liquid fuels. Also as steam cools, it condenses, reducing the smothering effect. It is also important to note that application of steam smothering to fires involved with nitrates, sulfates, and explosives will have disastrous effects.

- **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

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-47
-----------	--------------------------	---	---	------	---------

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.

8450 Strategy and Tactics. See Appendix C for Initial Fire Response, Firefighting Operations, and Machinery & Engineering Checklist. The checklist is not all-inclusive. It should be used as a guide for initial considerations at an incident.

- Land-based fire fighters will normally fight fires in facilities using structural tactics.
- Vessel fires require entirely different strategy and tactics. Fire departments are strongly encouraged to use the extensive information and advice in NFPA Standard 1405, Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires, 2001 Edition. This standard is copyright material, available from NFPA publication service, 1-800-344-3555.

8450.1 General Tactics for Common Vessel Spaces.

A shipboard fire will present the unprepared firefighter with an endless variety of difficulties. To ensure the readiness of the port, the COTP must have full confidence in not only the Coast Guard members in the command, but also in the knowledge and abilities of the local response services responsible for that port. One of the easiest and most beneficial steps in accomplishing this is to encourage the local fire department to periodically accompany Coast Guard marine inspectors on vessel inspections.

In this way firefighters can become acquainted with the construction, layout, organization, and available firefighting apparatus on board a variety of merchant vessels. These visits will allow firefighters to conduct a pre-planning fire survey. If a single

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-48
-----------	--------------------------	---	---	------	---------

survey can be conducted for each vessel which makes regular port calls, the survey can then be distributed as necessary to other firefighters.

□ **Public And Accommodation Spaces.**

- By the nature of their use, the first concern in responding to a fire in accommodation spaces is the rescue of victims.
- The National Fire Protection Association (NFPA) 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.
- Firefighting efforts will likely be additionally complicated by access and egress problems and difficulty in effective utilization of ventilation techniques.
- Extinguishment and overhaul of accommodation space fires can also be problematic due to the threat of fire extension through cableways, false overheads and other void spaces.

□ **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 hydraulics, sewage, fuel and lube oil, compressed air, and steam systems, as well as the machinery which provide electricity, and hotel services.
- 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 and will hinder hose line advancement. The variety and size of machinery spaces can make rescue operations difficult. While the vessel's fire plan should be consulted, 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, verify that all personnel have been evacuated from the space, which the emergency equipment shutdowns have been utilized, and that ventilation, power, and watertight doors to the space have been shutdown. With these steps completed, utilize the space's fixed system.
- If the resources are available, multiple dumps of extinguishing agent may be required before the fire can be controlled. Reentry to the space following use of a fixed system must not take place until the space has had time to cool. The

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-49
-----------	--------------------------	---	---	------	---------

amount of time necessary for cooling to effectively take place will vary with the size and intensity of the fire.

- Prior to reentry, automatic watertight doors should be set to manual to prevent possible personnel injury and severing of a hose line. The 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.

8450.2 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.

To determine what cargo is on board and where it is located, the vessel's Cargo Manifest and especially the Dangerous Cargo Manifest, should be reviewed. If possible, the review should be done in consultation with the vessel's master. Until the decision is made as to the best method of extinguishment, identification of a cargo off-loading site, and overhaul and disposal procedures are set, the hold should be sealed and the fixed fire suppression system should be activated.

If the fixed system is activated, bulkheads temperatures should be monitored hourly to track progress. Because any attempt to enter the hold after fixed system activation will introduce air into the fire area and allow escape of the extinguishing agent, the most important factor in utilizing a fixed system in this situation is the having the patience to allow the agent time to take effect.

(1) 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.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-50
-----------	--------------------------	---	---	------	---------

- Scrap metal cargos will probably require that the hold be sealed and inerted while cooling exposures.

(2) **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. For this reason, use of the installed fixed system is often the best course of action until a coordinated attack can be made.
- 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.

(3) **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 buttoned up and the fixed system dumped.

(4) **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. The hulls on some Ro/Ro vessels have a very high freeboard; this height can be

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-51
-----------	--------------------------	---	---	------	---------

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.
- If possible, it is generally best to employ the fixed system (usually a sprinkler or CO 2 system) in the cargo deck until the fire area can be accessed for a direct attack.

(5) **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 (NH₃) as the primary refrigerant. Exposure to anhydrous ammonia in its liquid state will cause severe burns on contact, and in a gaseous state possesses properties which cause severe irritation to eyes, skin, and mucous membrane as well as possibly causing fatal respiratory damage.
- Other than exposure hazards for firefighters, a release of anhydrous ammonia in an enclosed space introduces the possibility of a combustion explosion. Although characterized as having a limited flammability and low heat of combustion, in a fire scenario, enough pressure can be developed to cause major structural damage.

- **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 carriers, liquefied gas carriers, and chemical carriers.

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. These fires usually result from over filling tanks or the spillage of product onto the deck from a leak or rupture of the piping system. The practice of plugging scuppers during cargo operations will often help to contain a spill to the deck of the vessel. The presence of on deck cargo piping systems will hinder the advancement of firefighting operations.

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

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-52
-----------	--------------------------	---	---	------	---------

operation. Firefighters should take care to preserve the integrity of the tanks and cargo piping system.

(1) **Petroleum.**

- For petroleum on deck, the best course of action is to employ foam, provided sufficient quantities are available to maintain an unbroken blanket over the entire surface of the exposed product.
- If feasible, 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 both a salvage company with expertise and equipment, and 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.

(2) **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). The 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. Despite differences in physical characteristics, when ignited, the effective methods of extinguishment are similar.
- 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

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-53
-----------	--------------------------	---	---	------	---------

should never be used directly on the liquid as it will only serve vaporize the liquid.

(3) **Chemical.**

- The bulk transport of liquid chemicals has become one of the major commodities shipped by water. Because many chemicals possess characteristics which could endanger responders, 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.
- Clearly, the integrity of the tanks and cargo system must be maintained. In some instances, 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 layout of many of these vessels all but ensures that the Incident Commander, even with the benefit of pre-fire planning, will be faced with manpower shortages as fire fighters become fatigued and air supplies are exhausted in efforts to locate and extract victims, and then access and extinguish the fire.

The COTP's shall work with the passenger vessel industry, the port authority, and local response and relief agencies operating in their respective zones or AOR's to ensure the coordination of these parties for the evacuation of and accountability for the vessel's passengers in the event of fire or other emergency.

An accurate account of persons both ashore and aboard the vessel is critical in expediting the pace and aiding to ensure successful firefighting and rescue operations. The sooner search and rescue is completed the sooner efforts can be

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-54
-----------	--------------------------	---	---	------	---------

focused upon property conservation. The displacement of up to several hundred passengers will require pre-planning for lodging, medical attention, meals, transportation, and communications. The Sector Delaware Bay MASS Rescue plan will address these issues.

8460 Staging for Medical Treatment and Logistics.

The following sites shall be designated in the event marine disaster and/or fire to facilitate the medical treatment of victims:

- **Triage Area.** Area(s) established by emergency medical services to assess victims' injuries and prioritize their need for medical treatment. Victims may be treated in the triage area or transported to a medical facility depending upon the severity of their injuries. Medical personnel and supplies are contained within this area.
- **Medevac Area.** Area (s) established by emergency medical services for transfer of victims from triage areas to hospitals for medical treatment. This area should contain space for ambulance and helicopter access and will normally be in close proximity to the triage area.
- **Staging Area.** Area (s) established for staging of relief or replacement of emergency equipment, resources and vehicles. Also used as a gathering/rest point for relieved, reserve, and all nonessential personnel.
- **Embarkation Area.** Suitable area, wharf, or pier, designated for the discharge of victims and transfer of rescue personnel. This area should be in close proximity to the triage area for medical evaluation or treatment.
- **Morgue Area.** Temporary area, established by emergency medical services, set aside for storage and/or identification of deceased victims prior to their transport to a designated morgue facility.

8470 Security.

In a major SAR or Fire incident perimeter security around the incident area, command posts, triage, landing, embarkation and debarkation areas is critical to the operation. Perimeter security precludes injury to responding personnel and interference by unauthorized personnel.

- **Shore-side Security.** State and local police departments will be responsible for coordinating shore-side security and crowd control. Respective operations centers/field command posts will coordinate interagency security activities and establish direction, tactics, and order of command.
- **Spectators.** Control of shore-side spectators and motorists are the primary responsibilities of municipal law enforcement officials. Police departments will affect spectator and vehicle control by restricting unauthorized personnel or vehicles into or through operational areas.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-55
-----------	--------------------------	---	---	------	---------

- **Safety Zones and Broadcasts.** Security around the area of an incident is established with the creation of a safety zone, which will be published and enforced by the Coast Guard or other government agencies. The Coast Guard will also make appropriate radio broadcasts to alert and caution all vessels both in and outside the disaster area. The purpose of the zone is for general safety and environmental protection purposes; operation within such a zone is limited to persons, vehicles, vessels, and objects as may be authorized by the Coast Guard. Restricted air space above a disaster will be coordinated through the FAA.

8500 LOGISTICS.

8510 Federal Resources

8510.1 United States Coast Guard. In the event of a marine disaster or fire, the Coast Guard's primary responsibility is search and rescue. Coast Guard personnel are neither equipped nor trained to fight fires aboard commercial vessels or shore side facilities, but will render assistance to state, county, or municipal agencies if necessary. The National Search and Rescue (SAR) Manual (NSM) designates the Coast Guard as the On-Scene Commander (OSC) in the maritime region.

8510.2 Department of Homeland Security (DHS). It should be noted that when the National Response Framework (NRP) is implemented, the Coast Guard would function as a Department of Homeland Security (DHS) agency in support of EPA as per Emergency Support Function (ESF) 10, Hazardous Materials Annex. Since the DHS is either the primary or support agency for most of the other ESFs, the Coast Guard may be tasked with providing assistance for these other functions. Such is the case with ESF 9, Urban Search and Rescue, where the DHS is the primary agency; the Coast Guard may be tasked with aiding victims of flooding or other disasters. However the implementation of the FRP will not relieve the Coast Guard of its primary responsibilities in the maritime region, saving and or protecting lives and property.

8510.3 Department of Defense (DOD). DOD agencies have plans for marine salvage operations that implement the NSM, and they share in the responsibility of providing available assistance during a civil disaster, when that assistance does not interfere with their primary military missions.

- **U. S. Navy's Supervisor of Salvage (SUPSALV).** SUPSALV is the primary federal resource for marine salvage operations. Equipment and operators are available on a cost-reimbursable basis. Additionally SUPSALV provides phone consultations, evaluations of proposed salvage plans, and salvage engineers who are available for dispatch to a scene.
- **U. S. Air Force.** Under the NSM, the U. S. Air Force has the OSC responsibilities for inland SAR activities. If an AMC flight is involved in a marine disaster, DOD plays a large role in all response and remedial actions.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-56
-----------	--------------------------	---	---	------	---------

- **U. S. Army Corps of Engineers (ACOE).** The ACOE is responsible for maintaining federal waterways. If a vessel becomes a hazard to navigation, it is the owner's responsibility to remove it. If the owner cannot or will not, the ACOE may remove it and bill the owner for the expense.

USACE representatives will be consulted when planning to position a distressed vessel within the harbor. The USACE and Commander Sector Delaware Bay will consult on the placement of the vessel so as not to create a hazard to navigation. The USACE may also be able to provide afloat resources, e.g., small craft and barges. See Interagency Agreement between US Army Corps of Engineers U.S. Coast Guard.

8510.4 Federal Aviation Administration (FAA). The FAA is responsible for ensuring air safety. While it does not conduct SAR, it provides for air traffic communications, and has the authority to implement air space restrictions over a crash site, or over a marine disaster such a shipboard fire, if requested by a competent authority, (i.e. Fire Chief or federal agency). The FAA will play a major role in the initial awareness stage of aircraft disasters.

8510.5 Federal Emergency Management Agency (FEMA). FEMA primary purpose is to coordinate the response to a disaster that has occurred in the United States and that overwhelms the resources of local and state authorities. The governor of the state in which the disaster occurs must declare a state of emergency and formally request from the president that FEMA and the federal government respond to the disaster. FEMA also provides these services for territories of the United States, such as Puerto Rico.

The only exception is when an emergency or disaster occurs on federal property or to a federal asset, for example, the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma, or the Space Shuttle Columbia in the 2003 return-flight disaster.

8510.6 Federal Bureau of Investigation (FBI). The FBI consists of personnel specially trained in crime scene prosecution, and investigation of suspected terrorist activities; they will be requested to respond to any crash or suspected terrorist activity.

8510.7 National Transportation Safety Board (NTSB). The NTSB is an independent agency of the Federal government, supported by the Department of Transportation. The NTSB seeks to assure that all types of transportation in the United States are conducted safely. The board investigates accidents, conducts studies, and makes recommendations to government agencies, the transportation industry, and others regarding safety measures and practices.

8510.8 Environmental Protection Agency (EPA). The EPA coordinates the overall Federal effort to detect, identify, contain, and clean up or minimize releases of oil or hazardous substances, or prevents the threat of potential releases. EPA is the primary agency within the Federal Response Plan to provide Emergency Support Function (#10) response for oil and hazardous materials releases.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-57
-----------	--------------------------	---	---	------	---------

8510.9 National Oceanic and Atmospheric Administration (NOAA). NOAA is the lead agency in administering the satellite communications systems. It can provide environmental information and forecasted trajectories in the event of a discharge of oil, fuel, or hazardous substance during a disaster or fire. NOAA trajectories and additional information may be obtained by contacting the scientific support coordinator for this region.

8510.10 General Services Administration (GSA). GSA is available to provide a variety of logistical support in the event of a disaster such as contracting for services, arranging for transportation, obtaining vehicles, locating suitable space for command posts, etc.

8510.11 U. S. Fish and Wildlife Service (USFWS), Department of the Interior. The FWS has a strong interest in incidents that have a potential or actual impact on wildlife.

8520 Other Government Agency Resources

8520.1 State Governments.

- ☐ **Marine Law Enforcement Divisions.** State Police and other state law enforcement organizations would have concurrent jurisdiction over the waters of the Delaware River and Bay as well as their tributaries. In New Jersey, there is the State Marine Police; in Delaware, there is the Delaware Natural Resources and Environmental Conservation (DNREC) Division of Fish and Wildlife (DWF) Enforcement Division; in Pennsylvania, there is the Fish and Boat Commission. Their involvement will depend heavily on the nature and location of an incident.
- ☐ **State Emergency Management Agencies.** Pennsylvania, New Jersey, and Delaware have organizations that serve as statewide points of contact for planning and coordinating responses to disasters, including legislated interstate mutual aid plans and implementation procedures. Each state also has an extensive network of resources at the county (e.g., local emergency planning committees) and municipal (e.g., fire and rescue units) that serve as the framework of the states' disaster response capabilities. Accordingly, depending on the nature and complexity of an incident, state representation in response to an incident may actually come from the county or municipal level, such as with a shipboard fire.
- ☐ **State Department of Natural Resources and/or Environmental Protection.** All three states in the area have organizations that provide response assistance during oil and hazardous materials incidents and public health exposures, as well as information and advice concerning local wildlife habitat, and fisheries. Their involvement will depend heavily on the nature and location of an incident.
- ☐ **Port Authorities.** Municipalities may charter organizations to address trade, economic, and legal issues in particular ports. These organizations may have resources to respond to disasters or fires.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-58
-----------	--------------------------	---	---	------	---------

8520.2 County and Municipal Governments.

- **Fire Departments.** These resources will play a major role in initial responses to a marine disaster, especially when it involves a vessel on fire or a downed aircraft in the river or bay. The fireboats are to be supported by fire department land units. These same agencies have small rescue boats that can be used along with Coast Guard resources. Assisting fire departments units should not be split unless absolutely necessary. The expectation is that fire officers would retain operational control of their members and equipment. Assignments will be made in consideration of equipment and expertise. When a vessel is involved, a ship's crewmember should be assigned to each team, if practical. A major element of concern is the safety of responding firefighters. **List of local firefighting resources and equipment can be found in Appendix D.**
- **Law Enforcement Agencies.** Water and airborne resources are available from these agencies. These include municipal police departments, county sheriffs, and other specialized law enforcement agencies whose jurisdictions may overlap. They can be of assistance in keeping an area clear of spectators, directing traffic shoreside, evacuation of nearby communities if necessary, providing security and others services requested. Their assets include qualified divers, EMTs, and trained rescue teams.
- **Emergency Medical Services (EMS).** In some areas, EMS may be a separate entity; in others they are a part of the local fire department or hospital. In a mass casualty situation, EMS will be on scene conducting triage, providing aid, and transporting injured.
- **Harbor Master.** Harbor masters are usually employees of the municipality in the location of a harbor. They may be part of the municipal law enforcement agency or may be separate with their authority granted to them by the municipal government.
- **Emergency Operations Centers (EOCs).** EOCs may be operated by the state, county, or municipal governments, and have extensive inter-agency communications capabilities. They may be activated during significant emergencies such as a marine or natural disaster.

8530 Private Sector Resources. Other agencies or parties may, either provide assistance, or otherwise be interested in a marine disaster and may have a representative present at the command post. These would include:

- **Marine Chemists (Chemical Hazards Assessment).** Marine Chemists are essentially paid consultants who help monitor 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 fire fighting forces concerning the nature of chemical related hazards encountered.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-59
-----------	--------------------------	---	---	------	---------

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 1-800-262-8200, or the Coast Guard's National Response Center (NRC) at 1-800-424-8802.

- **Vessel Owner.** The owner of the vessel is documented on the vessel's certificate of registration or certificate of inspection. The owner has primary responsibility for the safety and seaworthiness of the vessel. Should the vessel sink or incur any other accident that causes it to become an obstruction to navigation, it is the owner's responsibility to mark it immediately and take the necessary actions to remove it.
- **Vessel Charterer.** In the case of a demise (bareboat) charter, the charterer is, in effect, the vessel owner. With a voyage or time charter, operators (personnel hired by the owner) continue to navigate and manage the vessel.
- **Vessel Operator.** The vessel operator is the person or company hired by the owner or charterer to operate the vessel and would therefore act as the owner's or charterer's representative.
- **Master.** The master is the owner's or charterer's lead representative who is charged with the responsibility of ensuring that the vessel is not operated in a negligent manner. He has contractual and legal obligations to ensure safety of the crew, vessel, and cargo.
- **Vessel's Agent.** Local contact for providing necessary provisions and services to visiting ships and their crews; acts as the direct liaison between the government agencies and the owner and master of a vessel. The agent may have valuable information concerning the vessel's current employment.
- **Pilot.** The pilot is an advisor to the master and aids the vessel's transit by providing local knowledge of the shipping channels. Pilotage laws require that a pilot be on board for all large vessel movements. The Delaware Bay and River Pilots Association should be contacted to determine the best method of handling and navigating a ship, especially if a vessel movement is being considered.
- **Classification Societies.** Classification societies may be able to provide updated information on the vessel's condition. Surveyors may be employed by the societies, underwriters, or other parties to conduct inspections prior to attesting to the vessels condition.
- **Carrier.** As defined in 46 UCS 1301, the term "carrier" includes the owner or charterer, who enters into a contract of carriage with the shipper. Under the general law of maritime carriage, the carrier of goods by sea is absolutely responsible for its safe arrival. Therefore, the carrier has a vested interest in saving the vessel and its cargo.
- **Cargo Owners.** A single person or corporation may own the entire cargo, or ownership may be divided between several persons or corporations depending on

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-60
-----------	--------------------------	---	---	------	---------

the situation. Cargo owners may have differing interests as to what happens to the cargo during the response.

- **Vessel and Cargo Assurers (underwriters, insurers).** In the United States, the insurer is nearly always a corporation. The assurer agrees to compensate the insured party in the event of any loss or damage. The assurers will be interested in the disposition of the vessel or the cargo as well as any proposed salvage. The vessel's Protection and Indemnity (P & I Club) representative is the general liability underwriter's representative and is key to vessel owner's funding of any firefighting action.
- **Maritime Attorneys.** Attorneys will often be hired to represent the owner in working with federal, state, and local authorities during a response when location of the incident is far from the company's office. They are usually given the authority to make certain decisions regarding the vessel and cargo.
- **Consulate Representatives.** Consulate Representatives may be needed if a fire involves a ship owned, registered in, and flying the flag of a foreign country. The consulate should be able to make translators available and can provide assistance to the ship's agent in locating and contacting the owner(s), if needed.
- **Naval Architects.** Naval architects would determine stability and conditions of a vessel in consultation with the Master and/or Chief Engineer. When there is a question of stability the COTP may recommend that operations be curtailed and require that the ships Master or agent have the ship evaluated before resuming fire-fighting operations.
- **Towing Companies.** During most shipboard fires, towing (tug) companies should be contacted early in the planning phase to evaluate their capability and willingness to provide towing services to burning ships. Tugs should also be utilized to move any barges or moored vessels that are in close proximity away from a burning ship or facility. The tug's firefighting capability can also be determined and, if able they can be used to cool the skin of the ship.
- **Commercial Firefighting and Salvage Companies.** Salvors may be hired to the salvage the vessel and/or cargo. Salvage companies would also be able to provide assistance in drafting or evaluating salvage plans. 33 CFR Part 155 requires that vessel owners and operators must identify salvage and marine firefighting services in their vessel response plans and set new response time requirements for each of the required salvage and marine firefighting services. **List of Commercial Firefighting and Salvage Companies can be found in Appendix E.**
- **Commercial Shipyards.** Shipyards will be necessary if the vessel is to be repaired. They may also have expertise and equipment that may be used to assist salvage operations.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-61
-----------	--------------------------	---	---	------	---------

- **River Front Facilities.** The facilities may offer resources (vessels or otherwise) that may prove helpful in the event of a marine disaster or fire. They could be used as staging areas for triage or launching sites for smaller rescue craft.
- **Longshoremen.** Longshoremen liaison representation will respond upon request to discuss cargo movement operations. It is important to coordinate activities so as to prevent labor disputes.
- **Maritime Exchanges.** Maritime Exchange representative can provide information that is available at the exchange on all vessels that call. Included in this data are the registry, vessel type, cargo and local agent. Also available are the physical dimensions, owners and managers.
- **Equipment Suppliers.** Supply sources for bulk quantities of expendable agents and equipment not usually in firefighting inventory. Examples would be bulk supplies of firefighting foam and equipment, CO₂ gas, large volume skid-mounted drop-pumps, etc. The need for prior identification, location and funding requirements for available industry and commercial equipment suppliers is self-evident.

8600 FINANCE.

8610 General.

In most cases, each responding agency will be responsible for funding their own efforts. This may include a fire department billing the owners of the vessel or terminal for resources used during the response. In situations where the fire poses a threat or causes a release of oil or hazardous materials, the Coast Guard can access federal funds to mitigate the pollution threat. Depending on the situation, mitigation may include funding firefighting efforts.

8620 Facility & Vessels Owner / Operators.

The owners of waterfront facilities and the owners and/or operators of vessels presumably have a marked interest in the safety of their facilities or vessels and the cargo they are handling. Also, government and the insurance industry regulate and hold a watchful eye over the owners and operators for port and environmental safety. In most cases, the owner or operator will make every effort to prevent or contain a fire. The owner of a facility and/or vessel will be held responsible for firefighting costs.

Aboard ship, the master is the direct representative of the owner. Ship owners and underwriters are generally responsible organizations and can be expected to meet their obligations. In many instances, the vessel owner will also send an additional representative, such as a port captain or fleet operations manager, to the disaster scene. This representative will be vested with the owner's authority to contract for services and supplies but will be unfamiliar with local resources.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-62
-----------	--------------------------	---	---	------	---------

The vessel's Protection & Indemnity representative (P&I Club) is the general liability underwriter's representative and is important to the vessel owner's funding of firefighting actions. The local P&I representative should be identified as soon as possible in the event of a fire. The ultimate liability of the P&I Club for any claim or cost is determined only by and between the vessel owner and the Club. Unless the Club, via the specific agreement of its authorized representative, commits to expenditure or obligates itself for a claim, the claimant's sole resort is to the vessel and its owner. Of course, in situations where the P&I insurance will be obviously applicable, the Club will, by its local representative, either supplement or replace the owner as response coordinator. Thereafter, the Club will deal directly with contractors and agencies.

Notification of the Club's local representative is the responsibility of the ship's master. A geographical directory of the Club's representatives (or "correspondents") will be on board. The representative will be a local admiralty law firm. If a 24-hour contact number is not given in the P&I book the Philadelphia Maritime Exchange Directory should be cross-referenced (under "Lawyers").

8630 State of Delaware.

Delaware state law gives broad authority to the Fire Chief to "request and be supplied with additional materials such as sand, treatments, chemicals, etc., and special equipment when it is deemed a necessity, to prevent the further spread of the fire or hazardous condition", and to charge the property owner for the costs incurred (16 Del Section 6701A). The interpretation is that the state will assume the responsibility of pursuing claims against owners. Also, the State Emergency Response Team may be activated which can access necessary expertise, resources and monies via the "Hazardous Substance Response Trust Fund. (Super Fund)".

8640 State of New Jersey.

The State Director, Office of Emergency Management (NJ OEM) (i.e., the Superintendent, NJ Division of State Police) is primarily responsible for planning, directing, and coordinating emergency or disaster preparedness operations within the State of New Jersey. The State Director's Procedures (Directive No. 33 of 12 January 1981) are to be followed by the municipal Fire Chief and the county Emergency Management Coordinator when requesting aid as a result of fire and/or situations leaving a municipality vulnerable to a fire. The directive states, "The decision to declare a Local Fire Disaster Emergency remains with the local Fire Chief and shall be based on an evaluation utilizing the best information available from agencies involved"

8650 State of Pennsylvania (Commonwealth).

Pennsylvania Emergency Management Agency (PEMA) is the agency that coordinates the execution of the Commonwealth's responsibilities and management of emergency services and resources. In accordance with the Pennsylvania Emergency Management Services Code (35 PA C.S.A. Sections 7101-7707) PEMA is authorized to assure the prompt, proper and effective discharge of the Commonwealth of Pennsylvania's responsibilities relating to

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-63
-----------	--------------------------	---	---	------	---------

disaster preparedness, response and recovery. The PEMA Director is the State Coordinating Officer responsible for coordinating and supervising the Commonwealth's and local government's response efforts in any disaster impacting the Commonwealth and its political subdivisions, including those following a Presidential Declaration of an emergency or a major disaster.

8660 U.S. Coast Guard.

In the event that the fire involves a threat or release of oil or hazardous materials, the Coast Guard COTP, acting in his role as the pre-designated Federal On Scene Coordinator (FOSC) for oil and hazardous material spills for the coastal zone, may access federal funds to mitigate the pollution threat. Federal funds can be accessed if the FOSC determines that the vessel or terminal owner/operator lacks funding to provide response resources or refuses to fund resources. In such a situation, the FOSC will access the Oil Spill Liability Trust Fund (OSLTF) for oil or the CERCLA Fund, otherwise known as "the Superfund" for hazardous material releases. Once a federal fund is opened, it can be used to fund other agency efforts. A Pollution Removal Funding Authorization will be established with that agency which will provide them a ceiling amount for the agency to work under. Forms will be provided to the agency for processing billing invoices.

8670 U. S. Army Corps of Engineers (ACOE).

The ACOE generally is involved after-the-fact if there is a blockage of the navigational channel. The Corps will take action to clear the channel, and will pursue reimbursement for federally funded work from the owner.

8680 Federal Emergency Management Agency (FEMA).

FEMA administers disaster funds through their regional office as they become available following a Presidential declaration of an emergency or disaster.

8700 TRAINING AND PLAN ADMINISTRATION.

8710 Training.

Part of every effective contingency plan is the development and implementation of a training program. Few Coast Guard personnel have very extensive experience responding to actual fires. Furthermore, few municipal fire agencies have very extensive experience responding to vessel fires. Therefore, to overcome inexperience and apprehension and to develop expertise, a systematic training program is essential.

Proper training is essential for Coast Guard personnel and municipal fire department personnel who respond to waterfront and vessel fires. Ideally, Coast Guard personnel who support or interact with municipal fire departments should be as well trained as the most minimally trained personnel with whom they will interact (including local fire fighters and crew members of merchant vessels). Although the training programs envisioned here will

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-64
-----------	--------------------------	---	---	------	---------

not make Coast Guard men and women professional fire fighters, but it will help them understand their capabilities and limitations, as well as those of municipal fire departments.

Each fire department, which is responsible for fighting shipboard fires, should establish a training program within their unit. To the extent possible, familiarization training and exercises should be conducted on vessels that call on the port. Sector Delaware Bay should coordinate familiarization training in conjunction with routine vessel inspections to allow fire department crews to tour vessels and become familiar with various vessel layouts.

8720 Drills and Exercises.

Coast Guard personnel shall have knowledge of the municipal fire department organization and capabilities. Frequent exercises between the Coast Guard, municipal fire departments and other concerned agencies should be conducted to help involve each party to understand roles, responsibilities, capabilities and limitations of all concerned. The results of these interactions should be used to further update and fine-tune this plan.

The COTP also recommends each fire department or response organization coordinate with port facilities and shippers in their respective jurisdictions and workout training and exercises on their own. The COTP will also assist coordination with other organizations if a larger exercise is required. For assistance in arranging an exercise, contact:

Commander
Sector Delaware Bay
Attn: Contingency Planning Staff
1 Washington Ave.
Philadelphia, PA. 19147

For further information consult [National Fire Protection Association; NFPA 1405: Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires](#)

A vessel owner or operator required by 33 CFR 155.1035 and 155.1040 to have a response plan shall conduct exercises as necessary to ensure that the plan will function in an emergency. Both announced and unannounced exercises must be included.

The following are the minimum exercise requirements for vessels covered by this subpart:

- Remote assessment and consultation exercises, which must be conducted quarterly;
- Emergency procedures exercises, which must be conducted quarterly;
- Shore-based salvage and shore-based marine firefighting management team tabletop exercises, which must be conducted annually;
- Response provider equipment deployment exercises, which must be conducted annually;

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-65
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- An exercise of the entire response plan, which must be conducted every three years. The vessel owner or operator shall design the exercise program so that all components of the response plan are exercised at least once every three years. All of the components do not have to be exercised at one time; they may be exercised over the 3-year period through the required exercises or through an area exercise; and
- Annually, at least one of the exercises listed in 33 CFR 155.4052(b)(2) and (4) must be unannounced. An unannounced exercise is one in which the personnel participating in the exercise have not been advised in advance of the exact date, time, or scenario of the exercise.
- Compliance with the National Preparedness for Response Exercise Program (PREP) Guidelines will satisfy the vessel response plan exercise requirements. These guidelines are available on the Internet at <https://Homeport.uscg.mil/exercises/>

Once on that Web site, select the link for “Preparedness for Response Exercise Program (PREP)” and then select “Preparedness for Response Exercise Program (PREP) Guidelines”. Compliance with an alternate program that meets the requirements of 33 CFR 155.1060(a), and has been approved under 33 CFR 155.1065 will also satisfy the vessel response plan exercise requirements.

8730 Plan Review.

The COTP is responsible for this plan and will keep it current by consecutively numbering amendments or by issuing a revised plan. Any errors, suggested improvements, or changes in equipment or facilities should be communicated to:

Each revision will be available via the Coast Guard’s HOMEPORT internet portal. The plan will be updated through electronic means when necessary. The plan may be accessed and downloaded to disk from the Internet address: <http://homeport.uscg.mil/delawarebay>

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	8000-66
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APPENDICES

Marine Fire / Explosion Notification Form

Part I – Initial Information			
<u>Name of Reporting Person:</u>		<u>Phone:</u> () --	<u>Address:</u>
<u>Reporting Person's Relationship to Incident (check box):</u> <input type="checkbox"/> Agent <input type="checkbox"/> Master/CEO <input type="checkbox"/> Working Party (Title:) <input type="checkbox"/> Other (Specify:)			
<u>Nature of Incident (check box):</u> <input type="checkbox"/> Vessel Fire <input type="checkbox"/> Facility Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Collision <input type="checkbox"/> Other (Specify:)			
Part II – Location of Incident			
<u>Latitude:</u> ° . " N		<u>Longitude:</u> ° . " W	
Vessel Fire			
<u>Vessel Name:</u>		<u>Call Sign:</u>	<u>Exact Location of Fire (i.e. compartment, deck):</u>
<u>Agent Name:</u>		<u>Agent Phone:</u>	<u>Vessel Flag:</u>
<u>Marina:</u>	<u>Berth:</u>	<u>Anchorage:</u>	<u>Address (if applicable):</u>
Facility Fire			
<u>Facility Name:</u>		<u>Exact Location of Fire (i.e. where on facility):</u>	
<u>Facility Phone:</u>		<u>Address (if applicable):</u>	
Part III – Fire and Safety Information			
Fire Details			
<u>Status of Fire (circle one):</u> Extinguished / Contained / Out of Control		<u>Class of Fire (check box):</u> <input type="checkbox"/> Alpha (paper, wood, etc.) <input type="checkbox"/> Bravo (fuels) <input type="checkbox"/> Charlie (electrical) <input type="checkbox"/> Delta (metals)	
<u>Firefighting Efforts (check box):</u> <input type="checkbox"/> None taken at time of report <input type="checkbox"/> In progress with vessel/facility crew <input type="checkbox"/> In progress with outside assistance: Specify:		<u>Source of Fire (check box):</u> Source known? <input type="checkbox"/> NO <input type="checkbox"/> YES Source Secured? <input type="checkbox"/> NO <input type="checkbox"/> YES	

Appendix A to DelBay ACP Section 8000 Marine Firefighting Plan

Shipboard/Facility Firefighting Systems:			
Type(s) Available:	Type(s) Expended:	Remaining Resources:	
Safety Information			
Personnel Status:	<input type="checkbox"/> Missing OR trapped <input type="checkbox"/> Injured <input type="checkbox"/> Dead		
Are there any personnel casualties? <input type="checkbox"/> NO <input type="checkbox"/> YES #	Type(s) of Injuries:	Location(s):	MEDEVAC? <input type="checkbox"/> NO <input type="checkbox"/> YES
Vessel Status: Can vessel maneuver? <input type="checkbox"/> NO <input type="checkbox"/> YES	Does Master wish to Anchor / Moor vessel? <input type="checkbox"/> NO <input type="checkbox"/> YES		
Part IV – Surrounding Area Hazards			
<u>Dangerous/Hazardous Cargo:</u>			
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
<u>Nearby Vessels/Facilities:</u>			
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	

County Fire Dispatch Centers (Fire Board)

As previously noted, prompt notification of the appropriate fire department is essential. Listed are the tri-state county fire dispatch center phone numbers to facilitate notifications.

Pennsylvania.

Bucks County	215-547-5222
Philadelphia County	215-922-6000
Delaware County	610-892-8406

Delaware.

New Castle County	302-571-7331 or 302-395-8203
Kent County	302-734-6042
(1) Dover	302-736-7171
Sussex County	302-855-7803
(1) Seaford	302-629-6644 (Ext. 236 Ops Center)
(2) Rehoboth Beach	302-227-2577

New Jersey.

Mercer County	609-799-0110
Burlington County	609-265-7157
Camden County	856-783-4800
Gloucester County	856-853-0911
Salem County	856-769-1955
Cumberland County	856-455-8500

Atlantic County:

Absecon	(609)-641-0667
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Appendix B to DelBay ACP Section 8000 Marine Firefighting Plan

Atlantic City	(609)-347-5780
Brigantine	(609)-266-7414
Egg Harbor City/	(609)-965-1200
Mullica Township	
Egg Harbor Township	(609)-927-2700
Hamilton Township	(609)-625-2700
Longport	(609)-822-2141
Margate	(609)-822-1151
Port Republic/	(609)-652-2037
Galloway Township	
Somers Point	(609)-927-6161
Ventnor	(609)-822-2101
Ocean County	(733)-349-9100
Cape May County	(609)-884-8414

Initial Fire Response Checklist

The following checklist is not all-inclusive. It should be used as a guide for initial considerations at an incident.

- ☐ Establish an identified Incident Command Post location.
- ☐ Establish Incident Command System (ICS).
- ☐ Establish security perimeter (waterside and shore side).
- ☐ Determine if hazardous materials are involved

Identify and communicate Offensive or Defensive tactical considerations.

Offensive Plan:

- ☐ Fire can be controlled or extinguished
- ☐ Fire can be confined to part of the vessel
- ☐ Property can be protected or saved on the vessel
- ☐ Lives can be saved, persons can be rescued on the vessel

Defensive Plan:

- ☐ Fire out of control
- ☐ Incident situation drastically changes and forces a move to Defensive Plan:
- ☐ Explosion, rapid fire spread
- ☐ Hazardous Materials involved
- ☐ Drastic stability situation
- ☐ Death or serious injury to response personnel
- ☐ Surround and drown
- ☐ Let incident stabilize itself
- ☐ Move vessel to a less impacted location
- ☐ Beach, ground or scuttle vessel - consult Coast Guard, Corps of Engineers
 - ☐ Identify Objectives.
 - ☐ Rescue endangered persons.
 - ☐ Perform actions to keep incident from enlarging, and protect exposures.
 - ☐ Stop cargo transfer, bunkering or dangerous cargo operations.
 - ☐ Contact responsible persons for information and assistance.
- ☐ **Master/Chief Mate/Chief Engineer**
 - General arrangement of vessel
 - Cargo situation

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	C-1
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- Stability operation of ship's systems
- Fire protection equipment and systems
- Fuel/ballast tanks
- Utility shutoffs
- Generators
- Dewatering
- ☐ Terminal Manager/Owner (Obtain sources of information about the vessel)
 - Fire Plan (found near top of gangway in water-tight container or in Master's/Chief Mate's office)
 - General Arrangement Plan
 - Capacity Plan
 - Dangerous Cargo Manifest (found near bridge or in Chief Mate's office)
 - Cargo Stowage Plan
 - Trim and Stability Booklet
 - Stability and liquid cargo computer programs
 - Crew and passenger lists
 - Material Safety Data Sheets for Hazardous and Dangerous Cargo
 - Vessel Response Plan
- ☐ Investigate fire and gather needed information to deal with the incident.
- ☐ Determine life hazard situation.
- ☐ Determine if stability, flooding or related damage control problems exist.
- ☐ Determine fire situation.
- ☐ Determine status and condition of ship's fire protection systems and equipment
 - ☐ Fire Main
 - International shore connection and manifold location
 - Supplement ship's fire main system with shoreside water and pressure
 - Fire station location and equipment (types of couplings/threads)
 - Compatibility with fire department's equipment
 - Fire pumps
 - ☐ Water spray or sprinkler systems
 - ☐ Foam systems
 - ☐ HALON localized and total flooding systems
 - ☐ Carbon Dioxide localized and total flooding systems

- ☐ Dry Chemical systems, twin agent systems
- ☐ Steam smothering
- ☐ Fixed monitors
- ☐ Emergency gear and Damage Control lockers and contents
- ☐ Heat detection systems, Smoke detection systems
- ☐ Fire rated bulkheads, zones, doors
- ☐ Identify locations of control valves, agent storage containers
- ☐ Determine methods of operation of fire protection systems
- ☐ Remote water-tight and fire doors
- ☐ Inert Gas systems
 - Take control of ship's fire protection systems.
 - Determine status and take control of ship's other systems (Ventilation, propulsion, cargo)
 - Contact outside additional resources for assistance and expertise.
 - Review cargo considerations, if applicable.
 - Expand Incident Command System as needed to handle incident.
 - Continually reevaluate operations and make changes as required.

Firefighting Operations Checklist

- ☐ Establish water supply to vessel
- ☐ Set fire boundaries
- ☐ Use minimum amount of water to accomplish task
- ☐ Take actions to remove/dewater firefighting water
- ☐ Continually investigate all areas of fire boundary for fire spread
- ☐ Consider using thermal imagers and taking temperature readings
- ☐ Secure ventilation and all openings to fire area
- ☐ Secure utilities, electrical and any fuel supplies to fire area
- ☐ Install floating booms around vessel or incident scene to contain debris and pollution
- ☐ Monitor vessel stability throughout incident
- ☐ Note changes in draft marks, inclinometers, etc.
 - Beware of large accumulations of water above vessel's waterline
 - Secure openings in hull to prevent water entering vessel should list occur

- Obtain technical assistance to determine stability situation and recommend corrective actions
- Begin adequate dewatering operations
- ☐ Mobilized and position sufficient personnel and hose lines, appliances, and extinguishing agents to control and extinguish fire
- ☐ Coordinate ventilation of fire area with fire attack
- ☐ Provide for sufficient rotation of personnel to maintain continuous extinguishing effort
- ☐ Beware of pressure buildup in secured spaces and maintain escape routes
- ☐ Begin necessary salvage operations
- ☐ When possible, set fire watch and begin overhaul and fire cause investigation

Machinery & Engineering Space Fire Checklist

These types of spaces and compartments usually have extensive amounts of fuel piping, lubricating oils, and electrical systems and wiring. There are also numerous sources of ignition and re-ignition. These spaces also may have large, open areas that can encompass several decks.

- ☐ Determine cause of fire
 - Leaking fuel
 - Electrical
 - Other
- ☐ Shut off all fuel flow to the space
- ☐ Secure electrical power to the space
- ☐ Close and secure all doors, hatches, ventilation ducts, dampers, and other openings to the space
- ☐ Determine fire conditions
- ☐ Interview the crew
- ☐ Visual indicators
- ☐ Actual investigation
- ☐ Quick Attack: fire is small enough to extinguish with portable extinguishers, large fixed extinguishers and/or 1-2 hose lines. Conditions include minimum smoke, heat, and adequate visibility.
- ☐ Fire too large for Quick Attack:
 - ☐ Rescue any trapped persons, if possible
 - ☐ Secure all openings to space until minimal smoke is escaping
 - ☐ Establish primary and secondary fire boundaries

- [] Activate Fixed Fire Extinguishing System for involved space, if available:
- Carbon Dioxide, HALON, Foam, Sprinklers, etc.
 - May involve several valves in different locations to discharge the agent
 - Use a vessel-engineering officer, if available, or other experienced person from marine community to activate the system
 - If any smoke is escaping from the involved space, so will the extinguishing agent
 - Consider supplementing the fixed system with shore-side supplies of extinguishing agent

Local Firefighting Resources & Equipment

List of local firefighting resources will be added to this part from the new NIMS-IRIS database.

I should have this updated this week.

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	D-1
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Commercial Firefighting / Salvage Resources & Equipment

Company	Location	Phone Number	Capabilities (equipment, services and resources)	Website / Comments
Alpat Towing & Salvage	Manahawkin, NJ	(609) 597-6040	• Boat Towing & Salvage	
Associated Marine Salvage, Inc.	<u>Miami, FL (Corporate Office)</u> <u>Port Orange, FL</u>	24 hrs 305-644-9636 <u>(305) 644-3034 (24 hrs)</u> <u>(305) 644-9370 Fax</u> <u>(386) 322-3630</u> <u>(386) 322-3399 Fax</u>	• Marine Casualty and Wreck Removal • Pollution Control and Prevention • Commercial Diving • Towing	http://www.amsisalvage.com/ AMSI personnel and full contingent of all necessary equipment are "ready to go" to respond to serve you, throughout the U.S. East Coast, Gulf Coast and entire Caribbean region, as well as anywhere else you may need us.
Budget Boat Towing & Salvage	Point Pleasant Beach, NJ	(732) 899-6010 (732) 899-5859 Fax	• Boat Towing, Diving & Salvage	
Donjon Marine Co., Inc	<u>Hillside, NJ</u>	<u>(908) 964-8812</u> <u>(908) 964-7426 Fax</u>	• Salvage and Wreck Removal • Dredging • Marine Towing, Floating derrick barge and Barge transportation services (Bulk and break-bulk commodities) • Marine Engineering • Heavy-Lift Derrick Barge, Lashing and Securing • Marine Demolition • Diving • Iron and Metal Division	http://www.donjon.com/index.htm
Ebb Tide Marine, Inc.	Waretown, NJ	(609) 660-7777	• Boat Towing & Diving	

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

Eason Diving & Marine Contractors, Inc.		(843) 747-0548	• Dive Operations (Hull survey)	Submerged oil recovery operations, contaminated diving operations (including oil, sewage, hazardous material recovery). Subcontractor with NRC, also has a BOA with the Coast Guard.
Marine Towing & Salvage, Inc	Barnegat Light, NJ Cape May, NJ	(609) 978-5922 (609) 898-8600	• Boat Towing & Salvage	
McAllister Towing	Camden, NJ	(856) 966-0811	• Boat Towing	
Progress Marine, Inc.		1-800-844-7792	• Dive Operations (Hull survey)	Progress Marine has six qualified divers who can conduct hull surveys. They can respond to the Marcus Hook area within 3 hours and Delaware Bay within 4 hours. They have a 45 foot boat that they can hire in Cape May, but may need to use a Coast Guard boat as a platform.
Philadelphia Post Society of American Military Engineers (SAME)	Philadelphia, PA			http://www.same.org http://www.samephiladelphiapost.org Resource Capabilities Data Base SAME Post Readiness and Homeland Security Committee has built a database of capabilities and experience of sustaining members and other firms to respond to natural and man-made disasters. Points of contact, specific capabilities (such as debris removal, damage inspections, dewatering, etc.).

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

Sea Tow	Toms River, NJ (Sea Tow of Manasquan)	(732) 270-1324 (732) 270-0645 Fax	• Boat Towing & Salvage	http:// seatowmanasquan.net
	Point Pleasant Beach, NJ	(732) 262-0909	• Boat Towing, Diving & Salvage	
	Brigantine, NJ	(609) 399-5501	• Boat Towing	
	Tuckerton, NJ	(609) 294-1595	• Boat Towing	
	Beach Haven, NJ	(609) 492-1677	• Boat Towing	
Sea Tow of Sea Isle City/Cape May/Delaware Bay	Clermont, NJ	(609) 263-2222 (609) 624-1055	• Boat Towing	http://www.seatowcapemay.com/index.html Service the entire southern coast of New Jersey, as well as the entire Delaware Bay and to the Canyons 100 miles out into the Atlantic Ocean. Sea Tow SIC/CM/Del Bay monitors VHF Channel 16 and will respond 24 hours a day.
Shamrock Towing & Salvage	Ocean City, NJ	(609) 391-9878	• Boat Towing & Salvage	http://shamrockmarinetowing.com/ Towing and salvage services for commercial vessels from NY to Norfolk

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

SMIT Salvage Americas, Inc.	Annapolis, MD	(410) 544-5248 (410) 544-6855 Fax smitannapolis@aol.com	<ul style="list-style-type: none"> • Marine emergency response, Wreck removal, Marine and salvage consultancy • Environmental care • Underwater bunker/cargo removal, Under water survey, video inspection • Marine fire fighting • Diving services 	http://www.smit.com/ Donjon-SMIT is a unique provider of emergency response services in which the individual expertise of Donjon and SMIT are combined. Donjon-SMIT LLC 635 Slaters Lane, Suite 210 Alexandria, VA 22314 Phone + 1 703 299 0081 (24-hour) Fax: + 1 703 299 0085 E-mail: info@donjon-smit.com E-mail: response@donjon-smit.com Website: www.donjon-smit.com
U.S. Coast Guard Marine Safety Center (MSC) Coast Guard Salvage Engineering Response Team (SERT)	Washington, DC	(202) 366-6480 NRC (800) 424-8802 After hours	<ul style="list-style-type: none"> • Technical analysis in the areas of vessel stability and structural integrity • Technical support for marine casualties: groundings, collisions, explosions, and fires. • Mobile computing capability for on-scene deployment • Database of about 5,000 hull files that can be used to generate computer models of vessels for use in salvage engineering. 	http://www.uscg.mil/hq/msc/ http://www.uscg.mil/hq/msc/salvage.htm SERT is comprised of 8-10 staff engineers who are on call 24 hours a day, 7 days a week, to assist and support COTP.

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

U.S. Navy Naval Sea Systems Command (NAVSEA) Supervisor of Salvage (SUPSALV)	Washington Navy Yard, DC	(202) 781-1731 (202) 781-3889 After hours – NAVSEA Duty Office (202) 781-4588 SUPSALV Fax	<ul style="list-style-type: none"> • Ship Salvage • Dive Operations • Pollution Response • Underwater Ship Husbandry (UWSH) 	http://www.supsalv.org/ The Emergency Ship Salvage Material (ESSM System is a managed network of emergency response equipment stockpiles pre-positioned to support and augment US Navy Fleet capability in the areas of Salvage, Diving, Pollution Response, and Underwater Ship Husbandry (UWSH).
Walker Diving Contractors, Inc.		609-992-3796	<ul style="list-style-type: none"> • Dive Operations (Hull survey) 	Walker Diving Contractors has ten qualified divers who can conduct hull surveys. They can respond to the Marcus Hook area within 2 hours and Delaware Bay within 3 - 4 hours. They have their own vessels but may depend on a launch service to get them to the site.
Waterfront Corporation			<ul style="list-style-type: none"> • Dive Operations (Hull survey) 	Waterfront Corporation has twenty-six qualified divers who can conduct hull surveys. They can respond to the Marcus Hook area within 1 - 1-1/2 hours and Delaware Bay within 2 - 3 hours. They may require the use of a Coast Guard boat on site.
Weeks Marine, Inc.	<u>Cranford, NJ (Corporate Office)</u> <u>Camden, NJ</u> <u>Jersey City, NJ (Marine Yard)</u>	(908) 272-4010 (908) 272-4740 Fax (856)-963-0963 (856)-963-0723 Fax (201)-435-0804 (201)-435-9858 Fax	<ul style="list-style-type: none"> • Dredging • Construction • Marine Transportation, Marine towing, Salvage towing, • Heavy-Lifting and Salvage • Equipment Charter/Rental 	http://www.weeksmarine.com/index.html
Wilmington Tug & Launch	Wilmington, DE	(302) 652-1666	<ul style="list-style-type: none"> • Boat Towing 	

ADDITIONAL SALVAGE CAPABILITIES

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	E-5
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Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

(Not with the local area)

Company	Location	Phone Number	Capabilities (equipment, services and resources)	Website / Comments
Marine Response Alliance, LLC	P.O. Box 350465	(206) 332-8200		http://www.marineresponsealliance.com http://www.titansalvage.com/
Resolve	Resolve Marine Group, Inc. 1850 SE 17 th Street, Suite 204 Fort Lauderdale, FL 33316	(954) 764-8700		http://resolvemarinegroup.com
T and T Bisso	9723 Teichman Road Galveston, TX 77554	(409) 744-1222		http://www.tandtmarine.com

PROP S E C T I V E S O U R C E [E.G., COMPANY NAME AND ADDRESS, POINT OF CONTACT, PHONE NUMBER, EMAIL]	Salvage Equipment Category [E.G. MARINE SALVAGE, DEMOLITION, CONSTRUCTION] [INSERT THE NUMBER AVAILABLE IN EACH SUB-CATEGORY]																NOTES [E.G., CAPACITY, AVAILABILITY, PUBLISHED RENTAL RATES, WEBSITE URLS]		
	Salvage Ship	Workboat	Crane Barge	Derrick Barge	Tugboat	Dredges	Barge (Dump Scow)	Barge (Hopper Scow)	Barge (Deck)	Pump (Air and Gear)	Pump (Portable)	Pump (Submersible)	Crane (type)	Crane (type)	Bulldozer (type)	Excavator (type)		Loader (type)	Hauler (type)
Donjon Marine Co., Inc 1250 Liberty Ave Hillside, NJ. 07205 (908) 964-8812 (908) 964-7426 Fax Email: info@donjon.com		4	3	1	7	4	3	12	8	6	5	3							http://www.donjon.com/vessels.htm
Weeks Marine, Inc. 901 Beach St. Camden, NJ 08102 (856)-963-0963 (856)-963-0723 Fax																			http://www.weeksmarine.com/index.html

LOCAL MARINE SALVAGE EQUIPMENT CATEGORY

PROPSECTIVE SOURCE [E.G., COMPANY NAME AND ADDRESS, POINT OF CONTACT, PHONE NUMBER, EMAIL]	Salvage Equipment Category [E.G. MARINE SALVAGE, DEMOLITION, CONSTRUCTION] [INSERT THE NUMBER AVAILABLE IN EACH SUB-CATEGORY]															NOTES [E.G., CAPACITY, AVAILABILITY, PUBLISHED RENTAL RATES, WEBSITE URLS]			
	Salvage Ship	Workboat	Crane Barge	Derrick Barge	Tugboat	Dredges	Barge (Dump Scow)	Barge (Hopper Scow)	Barge (Deck)	Pump (Air and Gear)	Pump (Portable)	Pump (Submersible)	Crane (type)	Crane (type)	Bulldozer (type)		Excavator (type)	Loader (type)	Hauler (type)

Special Team Salvage Capability Matrix (See HazMat Response Special Team Handbook 2005)

	SUPSALV	NSF	EPA/ERT	USACE	NOAA
Vessel Fire Assessment					
Oil	X				
Chemical Commercial	X				
Chemical Warfare Agent	X				
Biological	X				
Radiological	X				
Vessel Damage Assessment					
Oil	X	X	X		
Chemical Commercial	X	X	X		
Chemical Warfare Agent	X	X	X		
Biological	X		X		
Radiological	X		X		
Vessel Salvage					
Oil	X				
Chemical Commercial	X				
Chemical Warfare Agent	X				
Biological	X				
Radiological	X				
Vessel Plugging/Patching					
Oil	X	X		X	
Chemical Commercial	X	X		X	
Chemical Warfare Agent		X		X	
Radiological				X	
Diving Expertise					
Oil	X		X	X	X
Chemical Commercial	X		X	X	X
Chemical Warfare Agent	X		X	X	
Radiological	X		X	X	

SUPSALV: U.S. Navy Supervisor of Salvage & Diving

NSF: U.S. Coast Guard National Strike Force

EPA/ERT: Environmental Protection Agency Emergency Response Team

USACE: U.S. Army Corps of Engineers Rapid Response Team

NOAA: National Oceanic & Atmospheric Administration, Office of Response & Restoration, Hazardous Materials Response Division

Salvage and Marine Firefighting Services and Response Timeframes

Table 155.4030(b)—Salvage and Marine Firefighting Services and Response Timeframes

Service	Location of incident response activity timeframe	
(1) Salvage	CONUS: nearshore area; inland waters; Great Lakes; and OCONUS: < or = 12 miles from COTP city (hours)	CONUS: offshore area; and OCONUS: < or = 50 miles from COTP city (hours)
(i) <i>Assessment & Survey:</i>		
(A) Remote assessment and consultation	1	1
(B) Begin assessment of structural stability	3	3
(C) On-site salvage assessment	6	12
(D) Assessment of structural stability	12	18
(E) Hull and bottom survey	12	18
(ii) <i>Stabilization:</i>		
(A) Emergency towing	12	18
(B) Salvage plan	16	22
(C) External emergency transfer operations	18	24
(D) Emergency lightering	18	24
(E) Other refloating methods	18	24
(F) Making temporary repairs	18	24
(G) Diving services support	18	24

Appendix F to DelBay ACP Section 8000 Marine Firefighting Plan

(iii) <i>Specialized Salvage Operations:</i>			
(A) Special salvage operations plan		18	24
(B) Subsurface product removal		72	84
(C) Heavy lift ¹		Estimated	Estimated
(2) Marine firefighting	At pier (hours)	CONUS: Nearshore area; inland waters; Great Lakes; and OCONUS: < or = 12 miles from COTP city (hours)	CONUS: Offshore area; and OCONUS: < or = 50 miles from COTP city (hours)
(i) <i>Assessment & Planning:</i>			
(A) Remote assessment and consultation	1	1	1
(B) On-site fire assessment	2	6	12
(ii) <i>Fire Suppression:</i>			
(A) External firefighting teams	4	8	12
(B) External vessel firefighting systems	4	12	18

¹Heavy lift services are not required to have definite hours for a response time. The planholder must still contract for heavy lift services, provide a description of the heavy lift response and an estimated response time when these services are required, however, none of the timeframes listed in the table in §155.4030(b) will apply to these services.

Response Timeframe End Points

Table 155.4040(c)—Response Timeframe End Points

Service	Response timeframe ends when
(1) Salvage:	
(i) Remote assessment and consultation	Salvor is in voice contact with Qualified Individual (QI)/Master/Operator.
(ii) Begin assessment of structural stability	A structural assessment of the vessel has been initiated.
(iii) On-site salvage assessment	Salvor on board vessel.
(iv) Assessment of structural stability	Initial analysis is completed. This is a continual process, but at the time specified an analysis needs to be completed.
(v) Hull and bottom survey	Survey completed.
(vi) Emergency towing	Towing vessel on scene.
vii) Salvage plan	Plan completed and submitted to Incident Commander/Unified Command.
(viii) External emergency transfer operations	External pumps on board vessel.
(ix) Emergency lightering	Lightering equipment on scene and alongside.
(x) Other refloating methods	Salvage plan approved & resources on vessel.
(xi) Making temporary repairs	Repair equipment on board vessel.
(xii) Diving services support	Required support equipment & personnel on scene.
(xiii) Special salvage operations plan	Plan completed and submitted to Incident Commander/Unified Command.
(xiv) Subsurface product removal	Resources on scene.
(xv) Heavy lift ¹	Estimated.

Appendix F to DelBay ACP Section 8000 Marine Firefighting Plan

(2) Marine Firefighting:	
(i) Remote assessment and consultation	Firefighter in voice contact with QI/Master/Operator.
(ii) On-site fire assessment	Firefighter representative on site.
(iii) External firefighting teams	Team and equipment on scene.
(iv) External vessel firefighting systems	Personnel and equipment on scene.

¹Heavy lift services are not required to have definite hours for a response time. The planholder must still contract for heavy lift services, provide a description of the heavy lift response and an estimated response time when these services are required, however, none of the timeframes listed in the table in §155.4030(b) will apply to these services.

APPENDICES

Marine Fire / Explosion Notification Form

Part I – Initial Information			
<u>Name of Reporting Person:</u>		<u>Phone:</u> () --	<u>Address:</u>
<u>Reporting Person's Relationship to Incident (check box):</u> <input type="checkbox"/> Agent <input type="checkbox"/> Master/CEO <input type="checkbox"/> Working Party (Title:) <input type="checkbox"/> Other (Specify:)			
<u>Nature of Incident (check box):</u> <input type="checkbox"/> Vessel Fire <input type="checkbox"/> Facility Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Collision <input type="checkbox"/> Other (Specify:)			
Part II – Location of Incident			
<u>Latitude:</u> ° ' " N		<u>Longitude:</u> ° ' " W	
Vessel Fire			
<u>Vessel Name:</u>		<u>Call Sign:</u>	<u>Exact Location of Fire (i.e. compartment, deck):</u>
<u>Agent Name:</u>		<u>Agent Phone:</u>	<u>Vessel Flag:</u>
<u>Marina:</u>	<u>Berth:</u>	<u>Anchorage:</u>	<u>Address (if applicable):</u>
Facility Fire			
<u>Facility Name:</u>		<u>Exact Location of Fire (i.e. where on facility):</u>	
<u>Facility Phone:</u>		<u>Address (if applicable):</u>	
Part III – Fire and Safety Information			
Fire Details			
<u>Status of Fire (circle one):</u> Extinguished / Contained / Out of Control		<u>Class of Fire (check box):</u> <input type="checkbox"/> Alpha (paper, wood, etc.) <input type="checkbox"/> Bravo (fuels) <input type="checkbox"/> Charlie (electrical) <input type="checkbox"/> Delta (metals)	
<u>Firefighting Efforts (check box):</u> <input type="checkbox"/> None taken at time of report <input type="checkbox"/> In progress with vessel/facility crew <input type="checkbox"/> In progress with outside assistance: Specify:		<u>Source of Fire (check box):</u> Source known? <input type="checkbox"/> NO <input type="checkbox"/> YES Source Secured? <input type="checkbox"/> NO <input type="checkbox"/> YES	

Appendix A to DelBay ACP Section 8000 Marine Firefighting Plan

Shipboard/Facility Firefighting Systems:			
Type(s) Available:	Type(s) Expended:	Remaining Resources:	
Safety Information			
Personnel Status:	<input type="checkbox"/> Missing OR trapped <input type="checkbox"/> Injured <input type="checkbox"/> Dead		
Are there any personnel casualties? <input type="checkbox"/> NO <input type="checkbox"/> YES #	Type(s) of Injuries:	Location(s):	MEDEVAC? <input type="checkbox"/> NO <input type="checkbox"/> YES
Vessel Status: Can vessel maneuver? <input type="checkbox"/> NO <input type="checkbox"/> YES	Does Master wish to Anchor / Moor vessel? <input type="checkbox"/> NO <input type="checkbox"/> YES		
Part IV – Surrounding Area Hazards			
<u>Dangerous/Hazardous Cargo:</u>			
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
Type:	Quantity:	Distance from Fire:	Location:
<u>Nearby Vessels/Facilities:</u>			
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	
Type:	Name:	Distance from Fire:	

County Fire Dispatch Centers (Fire Board)

As previously noted, prompt notification of the appropriate fire department is essential. Listed are the tri-state county fire dispatch center phone numbers to facilitate notifications.

Pennsylvania.

Bucks County	215-547-5222
Philadelphia County	215-922-6000
Delaware County	610-892-8406

Delaware.

New Castle County	302-571-7331 or 302-395-8203
Kent County	302-734-6042
(1) Dover	302-736-7171
Sussex County	302-855-7803
(1) Seaford	302-629-6644 (Ext. 236 Ops Center)
(2) Rehoboth Beach	302-227-2577

New Jersey.

Mercer County	609-799-0110
Burlington County	609-265-7157
Camden County	856-783-4800
Gloucester County	856-853-0911
Salem County	856-769-1955
Cumberland County	856-455-8500

Atlantic County:

Absecon	(609)-641-0667
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Appendix B to DelBay ACP Section 8000 Marine Firefighting Plan

Atlantic City	(609)-347-5780
Brigantine	(609)-266-7414
Egg Harbor City/	(609)-965-1200
Mullica Township	
Egg Harbor Township	(609)-927-2700
Hamilton Township	(609)-625-2700
Longport	(609)-822-2141
Margate	(609)-822-1151
Port Republic/	(609)-652-2037
Galloway Township	
Somers Point	(609)-927-6161
Ventnor	(609)-822-2101
Ocean County	(733)-349-9100
Cape May County	(609)-884-8414

Initial Fire Response Checklist

The following checklist is not all-inclusive. It should be used as a guide for initial considerations at an incident.

- ☐ Establish an identified Incident Command Post location.
- ☐ Establish Incident Command System (ICS).
- ☐ Establish security perimeter (waterside and shore side).
- ☐ Determine if hazardous materials are involved

Identify and communicate Offensive or Defensive tactical considerations.

Offensive Plan:

- ☐ Fire can be controlled or extinguished
- ☐ Fire can be confined to part of the vessel
- ☐ Property can be protected or saved on the vessel
- ☐ Lives can be saved, persons can be rescued on the vessel

Defensive Plan:

- ☐ Fire out of control
- ☐ Incident situation drastically changes and forces a move to Defensive Plan:
- ☐ Explosion, rapid fire spread
- ☐ Hazardous Materials involved
- ☐ Drastic stability situation
- ☐ Death or serious injury to response personnel
- ☐ Surround and drown
- ☐ Let incident stabilize itself
- ☐ Move vessel to a less impacted location
- ☐ Beach, ground or scuttle vessel - consult Coast Guard, Corps of Engineers
 - ☐ Identify Objectives.
 - ☐ Rescue endangered persons.
 - ☐ Perform actions to keep incident from enlarging, and protect exposures.
 - ☐ Stop cargo transfer, bunkering or dangerous cargo operations.
 - ☐ Contact responsible persons for information and assistance.
- ☐ **Master/Chief Mate/Chief Engineer**
 - General arrangement of vessel
 - Cargo situation

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	C-1
-----------	--------------------------	---	---	------	-----

- Stability operation of ship's systems
- Fire protection equipment and systems
- Fuel/ballast tanks
- Utility shutoffs
- Generators
- Dewatering
- ☐ Terminal Manager/Owner (Obtain sources of information about the vessel)
 - Fire Plan (found near top of gangway in water-tight container or in Master's/Chief Mate's office)
 - General Arrangement Plan
 - Capacity Plan
 - Dangerous Cargo Manifest (found near bridge or in Chief Mate's office)
 - Cargo Stowage Plan
 - Trim and Stability Booklet
 - Stability and liquid cargo computer programs
 - Crew and passenger lists
 - Material Safety Data Sheets for Hazardous and Dangerous Cargo
 - Vessel Response Plan
- ☐ Investigate fire and gather needed information to deal with the incident.
- ☐ Determine life hazard situation.
- ☐ Determine if stability, flooding or related damage control problems exist.
- ☐ Determine fire situation.
- ☐ Determine status and condition of ship's fire protection systems and equipment
 - ☐ Fire Main
 - International shore connection and manifold location
 - Supplement ship's fire main system with shoreside water and pressure
 - Fire station location and equipment (types of couplings/threads)
 - Compatibility with fire department's equipment
 - Fire pumps
 - ☐ Water spray or sprinkler systems
 - ☐ Foam systems
 - ☐ HALON localized and total flooding systems
 - ☐ Carbon Dioxide localized and total flooding systems

- ☐ Dry Chemical systems, twin agent systems
- ☐ Steam smothering
- ☐ Fixed monitors
- ☐ Emergency gear and Damage Control lockers and contents
- ☐ Heat detection systems, Smoke detection systems
- ☐ Fire rated bulkheads, zones, doors
- ☐ Identify locations of control valves, agent storage containers
- ☐ Determine methods of operation of fire protection systems
- ☐ Remote water-tight and fire doors
- ☐ Inert Gas systems
 - Take control of ship's fire protection systems.
 - Determine status and take control of ship's other systems (Ventilation, propulsion, cargo)
 - Contact outside additional resources for assistance and expertise.
 - Review cargo considerations, if applicable.
 - Expand Incident Command System as needed to handle incident.
 - Continually reevaluate operations and make changes as required.

Firefighting Operations Checklist

- ☐ Establish water supply to vessel
- ☐ Set fire boundaries
- ☐ Use minimum amount of water to accomplish task
- ☐ Take actions to remove/dewater firefighting water
- ☐ Continually investigate all areas of fire boundary for fire spread
- ☐ Consider using thermal imagers and taking temperature readings
- ☐ Secure ventilation and all openings to fire area
- ☐ Secure utilities, electrical and any fuel supplies to fire area
- ☐ Install floating booms around vessel or incident scene to contain debris and pollution
- ☐ Monitor vessel stability throughout incident
- ☐ Note changes in draft marks, inclinometers, etc.
 - Beware of large accumulations of water above vessel's waterline
 - Secure openings in hull to prevent water entering vessel should list occur

- Obtain technical assistance to determine stability situation and recommend corrective actions
- Begin adequate dewatering operations
- ☐ Mobilized and position sufficient personnel and hose lines, appliances, and extinguishing agents to control and extinguish fire
- ☐ Coordinate ventilation of fire area with fire attack
- ☐ Provide for sufficient rotation of personnel to maintain continuous extinguishing effort
- ☐ Beware of pressure buildup in secured spaces and maintain escape routes
- ☐ Begin necessary salvage operations
- ☐ When possible, set fire watch and begin overhaul and fire cause investigation

Machinery & Engineering Space Fire Checklist

These types of spaces and compartments usually have extensive amounts of fuel piping, lubricating oils, and electrical systems and wiring. There are also numerous sources of ignition and re-ignition. These spaces also may have large, open areas that can encompass several decks.

- ☐ Determine cause of fire
 - Leaking fuel
 - Electrical
 - Other
- ☐ Shut off all fuel flow to the space
- ☐ Secure electrical power to the space
- ☐ Close and secure all doors, hatches, ventilation ducts, dampers, and other openings to the space
- ☐ Determine fire conditions
- ☐ Interview the crew
- ☐ Visual indicators
- ☐ Actual investigation
- ☐ Quick Attack: fire is small enough to extinguish with portable extinguishers, large fixed extinguishers and/or 1-2 hose lines. Conditions include minimum smoke, heat, and adequate visibility.
- ☐ Fire too large for Quick Attack:
 - ☐ Rescue any trapped persons, if possible
 - ☐ Secure all openings to space until minimal smoke is escaping
 - ☐ Establish primary and secondary fire boundaries

- [] Activate Fixed Fire Extinguishing System for involved space, if available:
- Carbon Dioxide, HALON, Foam, Sprinklers, etc.
 - May involve several valves in different locations to discharge the agent
 - Use a vessel-engineering officer, if available, or other experienced person from marine community to activate the system
 - If any smoke is escaping from the involved space, so will the extinguishing agent
 - Consider supplementing the fixed system with shore-side supplies of extinguishing agent

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	C-5
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Local Firefighting Resources & Equipment

Follow the link below for a list of local firefighting resources by state:

[http://www.capecodfd.com/PAGES%20Special/Fireboats_01_Main-Page.htm#By States](http://www.capecodfd.com/PAGES%20Special/Fireboats_01_Main-Page.htm#By%20States)

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	D-1
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Commercial Firefighting / Salvage Resources & Equipment

Company	Location	Phone Number	Capabilities (equipment, services and resources)	Website / Comments
Alpat Towing & Salvage	Manahawkin, NJ	(609) 597-6040	• Boat Towing & Salvage	
Associated Marine Salvage, Inc.	<u>Miami, FL (Corporate Office)</u> <u>Port Orange, FL</u>	24 hrs 305-644-9636 <u>(305) 644-3034 (24 hrs)</u> <u>(305) 644-9370 Fax</u> <u>(386) 322-3630</u> <u>(386) 322-3399 Fax</u>	• Marine Casualty and Wreck Removal • Pollution Control and Prevention • Commercial Diving • Towing	http://www.amsisalvage.com/ AMSI personnel and full contingent of all necessary equipment are "ready to go" to respond to serve you, throughout the U.S. East Coast, Gulf Coast and entire Caribbean region, as well as anywhere else you may need us.
Budget Boat Towing & Salvage	Point Pleasant Beach, NJ	(732) 899-6010 (732) 899-5859 Fax	• Boat Towing, Diving & Salvage	
Donjon Marine Co., Inc	<u>Hillside, NJ</u>	<u>(908) 964-8812</u> <u>(908) 964-7426 Fax</u>	• Salvage and Wreck Removal • Dredging • Marine Towing, Floating derrick barge and Barge transportation services (Bulk and break-bulk commodities) • Marine Engineering • Heavy-Lift Derrick Barge, Lashing and Securing • Marine Demolition • Diving • Iron and Metal Division	http://www.donjon.com/index.htm
Ebb Tide Marine, Inc.	Waretown, NJ	(609) 660-7777	• Boat Towing & Diving	

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

Eason Diving & Marine Contractors, Inc.		(843) 747-0548	• Dive Operations (Hull survey)	Submerged oil recovery operations, contaminated diving operations (including oil, sewage, hazardous material recovery). Subcontractor with NRC, also has a BOA with the Coast Guard.
Marine Towing & Salvage, Inc	Barnegat Light, NJ Cape May, NJ	(609) 978-5922 (609) 898-8600	• Boat Towing & Salvage	
McAllister Towing	Camden, NJ	(856) 966-0811	• Boat Towing	
Progress Marine, Inc.		1-800-844-7792	• Dive Operations (Hull survey)	Progress Marine has six qualified divers who can conduct hull surveys. They can respond to the Marcus Hook area within 3 hours and Delaware Bay within 4 hours. They have a 45 foot boat that they can hire in Cape May, but may need to use a Coast Guard boat as a platform.
Philadelphia Post Society of American Military Engineers (SAME)	Philadelphia, PA			http://www.same.org http://www.samephiladelphiapost.org <u>Resource Capabilities Data Base</u> SAME Post Readiness and Homeland Security Committee has built a database of capabilities and experience of sustaining members and other firms to respond to natural and man-made disasters. Points of contact, specific capabilities (such as debris removal, damage inspections, dewatering, etc.).

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

Sea Tow	Toms River, NJ (Sea Tow of Manasquan)	(732) 270-1324 (732) 270-0645 Fax	• Boat Towing & Salvage	http:// seatowmanasquan.net
	Point Pleasant Beach, NJ	(732) 262-0909	• Boat Towing, Diving & Salvage	
	Brigantine, NJ	(609) 399-5501	• Boat Towing	
	Tuckerton, NJ	(609) 294-1595	• Boat Towing	
	Beach Haven, NJ	(609) 492-1677	• Boat Towing	
Sea Tow of Sea Isle City/Cape May/Delaware Bay	Clermont, NJ	(609) 263-2222 (609) 624-1055	• Boat Towing	http://www.seatowcapemay.com/index.html Service the entire southern coast of New Jersey, as well as the entire Delaware Bay and to the Canyons 100 miles out into the Atlantic Ocean. Sea Tow SIC/CM/Del Bay monitors VHF Channel 16 and will respond 24 hours a day.
Shamrock Towing & Salvage	Ocean City, NJ	(609) 391-9878	• Boat Towing & Salvage	http://shamrockmarinetowing.com/ Towing and salvage services for commercial vessels from NY to Norfolk

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

SMIT Salvage Americas, Inc.	Annapolis, MD	(410) 544-5248 (410) 544-6855 Fax smitannapolis@aol.com	<ul style="list-style-type: none"> • Marine emergency response, Wreck removal, Marine and salvage consultancy • Environmental care • Underwater bunker/cargo removal, Under water survey, video inspection • Marine fire fighting • Diving services 	http://www.smit.com/ Donjon-SMIT is a unique provider of emergency response services in which the individual expertise of Donjon and SMIT are combined. Donjon-SMIT LLC 635 Slaters Lane, Suite 210 Alexandria, VA 22314 Phone + 1 703 299 0081 (24-hour) Fax: + 1 703 299 0085 E-mail: info@donjon-smit.com E-mail: response@donjon-smit.com Website: www.donjon-smit.com
U.S. Coast Guard Marine Safety Center (MSC) Coast Guard Salvage Engineering Response Team (SERT)	Washington, DC	(202) 366-6480 NRC (800) 424-8802 After hours	<ul style="list-style-type: none"> • Technical analysis in the areas of vessel stability and structural integrity • Technical support for marine casualties: groundings, collisions, explosions, and fires. • Mobile computing capability for on-scene deployment • Database of about 5,000 hull files that can be used to generate computer models of vessels for use in salvage engineering. 	http://www.uscg.mil/hq/msc/ http://www.uscg.mil/hq/msc/salvage.htm SERT is comprised of 8-10 staff engineers who are on call 24 hours a day, 7 days a week, to assist and support COTP.

Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

U.S. Navy Naval Sea Systems Command (NAVSEA) Supervisor of Salvage (SUPSALV)	Washington Navy Yard, DC	(202) 781-1731 (202) 781-3889 After hours – NAVSEA Duty Office (202) 781-4588 SUPSALV Fax	<ul style="list-style-type: none"> • Ship Salvage • Dive Operations • Pollution Response • Underwater Ship Husbandry (UWSH) 	http://www.supsalv.org/ The Emergency Ship Salvage Material (ESSM System is a managed network of emergency response equipment stockpiles pre-positioned to support and augment US Navy Fleet capability in the areas of Salvage, Diving, Pollution Response, and Underwater Ship Husbandry (UWSH).
Walker Diving Contractors, Inc.		609-992-3796	<ul style="list-style-type: none"> • Dive Operations (Hull survey) 	Walker Diving Contractors has ten qualified divers who can conduct hull surveys. They can respond to the Marcus Hook area within 2 hours and Delaware Bay within 3 - 4 hours. They have their own vessels but may depend on a launch service to get them to the site.
Waterfront Corporation			<ul style="list-style-type: none"> • Dive Operations (Hull survey) 	Waterfront Corporation has twenty-six qualified divers who can conduct hull surveys. They can respond to the Marcus Hook area within 1 - 1-1/2 hours and Delaware Bay within 2 - 3 hours. They may require the use of a Coast Guard boat on site.
Weeks Marine, Inc.	<u>Cranford, NJ (Corporate Office)</u> <u>Camden, NJ</u> <u>Jersey City, NJ (Marine Yard)</u>	(908) 272-4010 (908) 272-4740 Fax (856)-963-0963 (856)-963-0723 Fax (201)-435-0804 (201)-435-9858 Fax	<ul style="list-style-type: none"> • Dredging • Construction • Marine Transportation, Marine towing, Salvage towing, • Heavy-Lifting and Salvage • Equipment Charter/Rental 	http://www.weeksmarine.com/index.html
Wilmington Tug & Launch	Wilmington, DE	(302) 652-1666	<ul style="list-style-type: none"> • Boat Towing 	

ADDITIONAL SALVAGE CAPABILITIES

Change 20	Classification UNCLAS	Controlling Authority USCG Sector Delaware Bay	Issuing Authority CAPT Meredith Austin	Page	E-5
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Appendix E to DelBay ACP Section 8000 Marine Firefighting Plan

(Not with the local area)

Company	Location	Phone Number	Capabilities (equipment, services and resources)	Website / Comments
Marine Response Alliance, LLC	P.O. Box 350465	(206) 332-8200		http://www.marineresponsealliance.com http://www.titansalvage.com/
Resolve	Resolve Marine Group, Inc. 1850 SE 17 th Street, Suite 204 Fort Lauderdale, FL 33316	(954) 764-8700		http://resolvemarinegroup.com
T and T Bisso	9723 Teichman Road Galveston, TX 77554	(409) 744-1222		http://www.tandtmarine.com

PROPTECTIVE SOURCE [E.G., COMPANY NAME AND ADDRESS, POINT OF CONTACT, PHONE NUMBER, EMAIL]	Salvage Equipment Category [E.G. MARINE SALVAGE, DEMOLITION, CONSTRUCTION] [INSERT THE NUMBER AVAILABLE IN EACH SUB-CATEGORY]																NOTES [E.G., CAPACITY, AVAILABILITY, PUBLISHED RENTAL RATES, WEBSITE URLS]		
	Salvage Ship	Workboat	Crane Barge	Derrick Barge	Tugboat	Dredges	Barge (Dump Scow)	Barge (Hopper Scow)	Barge (Deck)	Pump (Air and Gear)	Pump (Portable)	Pump (Submersible)	Crane (type)	Crane (type)	Bulldozer (type)	Excavator (type)		Loader (type)	Hauler (type)
Donjon Marine Co., Inc 1250 Liberty Ave Hillside, NJ. 07205 (908) 964-8812 (908) 964-7426 Fax Email: info@donjon.com		4	3	1	7	4	3	12	8	6	5	3							http://www.donjon.com/vessels.htm
Weeks Marine, Inc. 901 Beach St. Camden, NJ 08102 (856)-963-0963 (856)-963-0723 Fax																			http://www.weeksmarine.com/index.html

LOCAL MARINE SALVAGE EQUIPMENT CATEGORY

PROPSECTIVE SOURCE [E.G., COMPANY NAME AND ADDRESS, POINT OF CONTACT, PHONE NUMBER, EMAIL]	Salvage Equipment Category [E.G. MARINE SALVAGE, DEMOLITION, CONSTRUCTION] [INSERT THE NUMBER AVAILABLE IN EACH SUB-CATEGORY]															NOTES [E.G., CAPACITY, AVAILABILITY, PUBLISHED RENTAL RATES, WEBSITE URLS]			
	Salvage Ship	Workboat	Crane Barge	Derrick Barge	Tugboat	Dredges	Barge (Dump Scow)	Barge (Hopper Scow)	Barge (Deck)	Pump (Air and Gear)	Pump (Portable)	Pump (Submersible)	Crane (type)	Crane (type)	Bulldozer (type)		Excavator (type)	Loader (type)	Hauler (type)

Special Team Salvage Capability Matrix (See HazMat Response Special Team Handbook 2005)

	SUPSALV	NSF	EPA/ERT	USACE	NOAA
Vessel Fire Assessment					
Oil	X				
Chemical Commercial	X				
Chemical Warfare Agent	X				
Biological	X				
Radiological	X				
Vessel Damage Assessment					
Oil	X	X	X		
Chemical Commercial	X	X	X		
Chemical Warfare Agent	X	X	X		
Biological	X		X		
Radiological	X		X		
Vessel Salvage					
Oil	X				
Chemical Commercial	X				
Chemical Warfare Agent	X				
Biological	X				
Radiological	X				
Vessel Plugging/Patching					
Oil	X	X		X	
Chemical Commercial	X	X		X	
Chemical Warfare Agent		X		X	
Radiological				X	
Diving Expertise					
Oil	X		X	X	X
Chemical Commercial	X		X	X	X
Chemical Warfare Agent	X		X	X	
Radiological	X		X	X	

SUPSALV: U.S. Navy Supervisor of Salvage & Diving

NSF: U.S. Coast Guard National Strike Force

EPA/ERT: Environmental Protection Agency Emergency Response Team

USACE: U.S. Army Corps of Engineers Rapid Response Team

NOAA: National Oceanic & Atmospheric Administration, Office of Response & Restoration, Hazardous Materials Response Division

Salvage and Marine Firefighting Services and Response Timeframes

Table 155.4030(b)—Salvage and Marine Firefighting Services and Response Timeframes

Service	Location of incident response activity timeframe	
(1) Salvage	CONUS: nearshore area; inland waters; Great Lakes; and OCONUS: < or = 12 miles from COTP city (hours)	CONUS: offshore area; and OCONUS: < or = 50 miles from COTP city (hours)
(i) <i>Assessment & Survey:</i>		
(A) Remote assessment and consultation	1	1
(B) Begin assessment of structural stability	3	3
(C) On-site salvage assessment	6	12
(D) Assessment of structural stability	12	18
(E) Hull and bottom survey	12	18
(ii) <i>Stabilization:</i>		
(A) Emergency towing	12	18
(B) Salvage plan	16	22
(C) External emergency transfer operations	18	24
(D) Emergency lightering	18	24
(E) Other refloating methods	18	24
(F) Making temporary repairs	18	24
(G) Diving services support	18	24

Appendix F to DelBay ACP Section 8000 Marine Firefighting Plan

(iii) <i>Specialized Salvage Operations:</i>			
(A) Special salvage operations plan		18	24
(B) Subsurface product removal		72	84
(C) Heavy lift ¹		Estimated	Estimated
(2) Marine firefighting	At pier (hours)	CONUS: Nearshore area; inland waters; Great Lakes; and OCONUS: < or = 12 miles from COTP city (hours)	CONUS: Offshore area; and OCONUS: < or = 50 miles from COTP city (hours)
(i) <i>Assessment & Planning:</i>			
(A) Remote assessment and consultation	1	1	1
(B) On-site fire assessment	2	6	12
(ii) <i>Fire Suppression:</i>			
(A) External firefighting teams	4	8	12
(B) External vessel firefighting systems	4	12	18

¹Heavy lift services are not required to have definite hours for a response time. The planholder must still contract for heavy lift services, provide a description of the heavy lift response and an estimated response time when these services are required, however, none of the timeframes listed in the table in §155.4030(b) will apply to these services.

Response Timeframe End Points

Table 155.4040(c)—Response Timeframe End Points

Service	Response timeframe ends when
(1) Salvage:	
(i) Remote assessment and consultation	Salvor is in voice contact with Qualified Individual (QI)/Master/Operator.
(ii) Begin assessment of structural stability	A structural assessment of the vessel has been initiated.
(iii) On-site salvage assessment	Salvor on board vessel.
(iv) Assessment of structural stability	Initial analysis is completed. This is a continual process, but at the time specified an analysis needs to be completed.
(v) Hull and bottom survey	Survey completed.
(vi) Emergency towing	Towing vessel on scene.
vii) Salvage plan	Plan completed and submitted to Incident Commander/Unified Command.
(viii) External emergency transfer operations	External pumps on board vessel.
(ix) Emergency lightering	Lightering equipment on scene and alongside.
(x) Other refloating methods	Salvage plan approved & resources on vessel.
(xi) Making temporary repairs	Repair equipment on board vessel.
(xii) Diving services support	Required support equipment & personnel on scene.
(xiii) Special salvage operations plan	Plan completed and submitted to Incident Commander/Unified Command.
(xiv) Subsurface product removal	Resources on scene.
(xv) Heavy lift ¹	Estimated.

Appendix F to DelBay ACP Section 8000 Marine Firefighting Plan

(2) Marine Firefighting:	
(i) Remote assessment and consultation	Firefighter in voice contact with QI/Master/Operator.
(ii) On-site fire assessment	Firefighter representative on site.
(iii) External firefighting teams	Team and equipment on scene.
(iv) External vessel firefighting systems	Personnel and equipment on scene.

¹Heavy lift services are not required to have definite hours for a response time. The planholder must still contract for heavy lift services, provide a description of the heavy lift response and an estimated response time when these services are required, however, none of the timeframes listed in the table in §155.4030(b) will apply to these services.