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Marine Safety Office Tampa

Fire Fighting Field Training Exercise

December 7, 1999

Evaluation Report

Participating Organizations:

U.S. Coast Guard Marine Safety Office Tampa
U.S. Coast Guard Group St. Petersburg
Tampa Fire Department
Tampa Port Authority
Hvide Marine Towing

Prepared By:

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EXECUTIVE SUMMARY

On December 7, 1999, Coast Guard Marine Safety Office Tampa, Tampa Fire Department, Tampa Port Authority and Hvide Marine Towing conducted a joint marine fire fighting field training exercise (FTX) in the Port of Tampa, Tampa, Florida. More than 50 people were involved from the organizations.

This exercise was designed to analyze the effectiveness of the fire fighting equipment in the port by testing the compatibility and capabilities between the responding agencies. The exercise also examined the notification process and identified areas for improvement in our preparedness.

The scenario was a simulation of a shipboard fire on board a freight vessel carrying lumber as it's primary cargo. The vessel had just got underway from berth 208 in East Bay, Tampa, FL. The fire was initially fought by the ships crew and grew immediately out of control. The remainder of the response was conducted in real time response by the Tampa Fire Department, Hvide Marine Towing and Tampa Port Authority. Response efforts were conducted in two phases, notification and mobilization.

The exercise was conducted as a real time response and lasted approximately 3 hours. This duration provided the opportunity to establish a response time-line for each of the response agencies.

During the exercise, the responding agencies mobilized equipment which was deployed to the simulated scene of a fire. This provided each agency familiarity with the others equipment capabilities.

The Fire Department response, involved two Tampa Fire Department engine companies, a foam trailer, one EMS vehicle and one small fire fighting boat. All land-based resources were loaded onto Tampa Port Authority's ro-ro barge. Hvide Marine Towing provided the tug ST JOHNS to deploy with the ro-ro barge in a stern tow.

All the organizations involved showed an enthusiastic desire to work in a cooperative manner. The following are the strengths that were noted:

- Initial notification adequately collected pertinent information, and identified immediate response organizations and alternate response resources and initiated necessary broadcasts and message traffic in a timely manner.

- Responding agencies were educated on each others capabilities, identifying best equipment usage and methods.

- Mobilization of equipment by all response organizations was timely providing for the immediate response and deployment of equipment.

- The ro-ro barge served as an excellent platform for waterside response, providing the fire department with another marine asset, in addition to their two fireboats.

- Hvide Marine Towing mobilized the tug ST JOHNS immediately which proved to be an excellent fire fighting asset with compatible fittings for the fire department's equipment and fire fighting monitors with excellent pumping capabilities.

RECOMMENDATIONS

As a result of this exercise various areas were noted where changes could improve the efficiency and effectiveness of the regions fire fighting capabilities. These include:

- Installing a fendering system on the ro-ro barge to allow tugs to put the barge in an alongside tow. This would improve maneuverability of the combined unit.
- Installation of a hydraulic system on the barge that will raise and lower the ramp automatically rather than requiring this to be done manually with forklifts.
- Outfitting other harbor tugs with fittings that are compatible with the fire departments equipment.

FTX OBJECTIVES

The specific FTX objectives for this exercise were:

Objective 1. Test the notification process.

Objective 2. Verify the compatibility of equipment between marine fire fighting response organizations.

Objective 3. Examine the coordination of mobilizing marine fire fighting equipment from marine fire fighting response organizations.

Objective 4. Determine marine fire fighting equipment operation capabilities.

Objective 5. Promote cooperation and education between all marine fire fighting response organizations.

GOALS

The MSO Tampa Fire Fighting FTX goals were developed by the participating organizations and exercise design staff. The goals for this exercise were:

1. Exercise the Port of Tampa marine fire fighting response system in a government-led marine fire fighting exercise.

2. Conduct a one day “real time” response mobilization exercise commencing with the initial notification.

3. Initiate a challenging scenario which will provide participants an opportunity to enhance knowledge and evaluate response capabilities, in a non-threatening environment.

4. Validate specific equipment compatibility and capability in response strategies of the marine fire fighting response community.

5. Provide feedback to marine fire fighting response organizations by identifying areas of improvement. Generate a report that illustrates lessons learned during development and performance of the exercise for the marine fire fighting response plan.

6. Exercise all five response objectives.

EXERCISE DESCRIPTION

This exercise simulated a major fire aboard a freight ship loaded with lumber within the MSO/COTP Tampa zone. This functional exercise focused on the mobilization of the marine fire fighting response organization, composed of members from the Port of Tampa marine fire fighting response community.

Upon initial notification of the simulated incident, each participating agency conducted notifications according to their response plans. Response resources were mobilized to Tampa Port Authority Berth 210, Port of Tampa, Tampa, FL. Tampa Fire Department resources were loaded onto the Tampa Port Authority ro-ro barge. Hvide Marine Towing tug ST JOHNS tied a line to the barge and got underway. The simulation was a half day exercise lasting approximately 3 hours. A joint evaluation team examined the effectiveness of the marine fire fighting resource mobilization.

During this exercise, the marine fire fighting response community was required to make appropriate notifications and mobilize resources.

SCENARIO

On December 7, 1999, at approximately 0855, the freight ship HOTSTUFF reports a shipboard fire to USCG Group St. Petersburg. The HOTSTUFF was moored at berth 208 and just completed loading bundles of lumber. At 0800 HOTSTUFF was underway in East Bay. A deck hand was making his way forward between the topside bundles of lumber and noticed smoke about 200 feet ahead of him in the area of the #1 hold. He retreats to the superstructure to sound the fire alarm and gathers his fire fighting gear.

There is a rapid increase in the amount of smoke which completely obstructs the bow of the ship, causing the ship to hold its position and eventually return to East Bay. From the bridge, the master orders the fire team to assemble and extinguish the fire. Within a few moments the U.S. Coast Guard is notified of the fire via cell phone. The crew fire team advances a hand line to the vicinity of the smoke and commences to search for the fire. Moving between the tightly stacked bundles of lumber, the crew quickly exhausts their air supply. It becomes necessary to retreat for fresh air.

Upon returning, they find one bundle on the main deck completely engulfed in flames. The flames have also engulfed the two bundles above it along with the ones on either side. The master immediately orders the onboard cranes to remove all the surrounding univolved bundles of lumber in order to allow easier access and limit further damage. When the onboard fire crew reports their findings to the master, he orders an additional fire crew to provide exposure protection.

The onboard fire crews have made little headway. The Tampa Fire Department is mobilizing their equipment to berth 210 to deploy on Tampa Port Authority's ro-ro barge. Hvide Marine Towing has been contacted and is sending the tug ST JOHNS to berth 210 to deploy the barge and assist with fighting the fire.

Upon arrival by the marine fire fighting response resources, flames are forty feet above the deck level and spreading towards the bow. The fire department establishes an Incident Command System on board the ro-ro barge.

An Urgent Marine Information Broadcast (UMIB) is issued by MSO Tampa. The area surrounding the burning vessel is temporarily closed to all vessel traffic. MSO Tampa identifies available fire fighting resources.

Tampa Fire Department and tug ST JOHNS set up and proceed to fight the fire.

FTX LESSONS LEARNED

Objective 1. Test notification process

Observation:

Notifications by all agencies were made in a timely fashion and were in accordance with respective agency response plans.

USCG Group St. Petersburg received the initial notification of a fire on board a freight ship HOTSTUFF. Group St. Petersburg took the basic information of: vessel's length, person's on board, injuries, location, cargo and number of holds, and a return number and name of the person making the notification. This information was then passed to MSO Tampa and the 911 dispatch.

MSO verified notification with Tampa Fire Department and then proceeded to notify Tampa Port Authority and Hvide Marine Towing via telephone.

MSO CDO simulated notifications to industry in the vicinity of East Bay area and to all vessels moored in East Bay and notified Command Cadre of the situation. UMIB, press release and safety zone was drafted and simulated issuance. Other marine fire fighting resources were identified for possible assistance.

MSO CDO attempted to contact the ST JOHNS using the VTIS.

Lesson Learned:

Although this was a simulated exercise, during the initial notification more information should have been obtained on the vessel. If this incident were to happen after normal work hours, more information would have been required to take the appropriate actions. Obtaining all of the information would save time and lesson the burden on the master of the vessel while he is trying to handle a crisis situation.

Recommended Action:

MSO Tampa and Group St. Petersburg use the same notification form to obtain all necessary information.

Objective 2. Check compatibility of marine fire fighting equipment between marine fire fighting response organizations.

Observation:

Tampa Fire Department trucks were able to mobilize and load onto Tampa Port Authority's ro-ro barge. The ramp was secured after loading by using a forklift to raise the ramp into place.

Tug ST JOHNS was able to get the barge underway however, the tow configuration did not sufficiently control the movement of the barge. ST JOHNS was capable of towing the ro-ro barge in stern tow and not able to secure it in an alongside tow.

Lessons Learned:

The ramp on the ro-ro barge was manually raised and lowered by a shore side forklift.

The tug ST JOHNS was not able to put the ro-ro barge in an alongside tow. The stern tow the ST JOHNS attempted did not sufficiently control the movement of the barge.

Recommended Action:

The installation of a hydraulic system or similar system on the ro-ro barge to raise and lower the ramp safely.

The installation of a fendering system on the ro-ro barge to make it possible for towing the barge in an alongside tow by the tug ST JOHNS .

Outfitting other tugs with fire fighting connections that would be compatible with the Tampa Fire Departments equipment.

Objective 3. Coordinate the mobilization of the equipment from the responding agencies.

Observation:

The coordination of the mobilization of the response resources went extremely well. The fire department received the notification and was on scene at berth 210 within 5 minutes. Tampa Port Authority was contacted and had equipment on scene to prepare the ro-ro barge for loading within 5 minutes. Hvide Marine Towing was notified and had the ST JOHNS underway and on scene at berth 210 within 30 minutes. The 30 minutes allowed the fire department to load their resources onto the barge.

Lesson Learned:

This part of the exercise went very well. All agencies are complemented for their timely response.

Recommended Action:

No recommendations.

Objective 4. Conduct equipment operation and capabilities.

Observation:

The fire department has compatible fittings to connect to the tug ST JOHNS which has sufficient pumping capability to supply the fire department. The ST JOHNS can provide foam for approximately 15 minutes but is not adequately outfitted to refill foam back into its storage tanks. A foam trailer can be loaded on the barge and run independently through the fire trucks system. The other tugs are not able to provide the necessary connections to allow the fire department to utilize the tugs water pumps.

Lessons Learned:

Tug ST JOHNS is best suited to assist the fire department with fire fighting response. It has compatible fire fighting hose fittings for the fire department to connect their hoses to and could act as a booster pump to the fire department. The ST JOHNS is outfitted with a fire monitor which can pump 3500 gallons of water per minute.

Tug HAWK is capable of an alongside tow on the barge without the installation of a fendering system, but, is not capable of supplying the fire department with additional fire fighting assets.

Recommended Action:

Outfit other tugs with compatible fire fighting connections.

Install fendering system on ro-ro barge.

Objective 5. Promote cooperation and education between all marine fire fighting response organizations.

Observation:

This exercise provided marine fire fighting response organizations a forum to exchange information and make improvements to response strategies. Key short falls were identified and recommended solutions and alternatives were provided to overcome these shortfalls.

Lessons Learned:

Conducting field training exercises provides response agencies the opportunity to identify and overcome deficiencies within the response system.

Recommended Action:

Periodically conduct field training exercises and make improvements to marine fire fighting response plans from the lessons learned by instituting recommended actions.

Joint Exercise Design and Evaluation Team

Exercise Staff:

Exercise Sponsor:	Coast Guard MSO Tampa
Exercise Director:	Captain A. L. Thompson, Jr.
Exercise Coordinator:	LT Bev Buysse

Exercise Design Team:

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Steve Howell	Hvide Marine Towing
Chief Simmons	Tampa Fire Department

Exercise Participants:

U. S. Coast Guard MSO Tampa
U. S. Coast Guard Group St. Petersburg
Tampa Port Authority
Tampa Fire Department

Photographic Documentation

Enclosure 1

This photo demonstrates how the fire engines were loaded onto the ro-ro barge.

Enclosure 2

This photo demonstrates the ladder truck loading onto the ro-ro barge.

Enclosure 3

This photo demonstrates how the ramp on the ro-ro barge is raised and lowered with a shore side fork lift.

Enclosure 4

This photo is a closer view of the shore side fork lift and strap system used to raise and lower the ramp on the ro-ro barge.

Enclosure 5

This photo demonstrates the barge sitting lower in the water than the tug's fenders and the need for a fendering system on the barge.

Enclosure 6

This photo demonstrates how the ST JOHNS was tied off to the ro-ro barge. The stern was tied up amidship on the barge.

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